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Small Rural Firms in English Regions: Analysis and Key findings from UK Longitudinal Small Business Survey, 2015

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Executive summary

England's rural firms are significantly more likely to be profitable, but have lower annual £turnover, than businesses in urban areas outside of London. This finding emerges from our rural-urban analysis of 13,403 small firms in England, including 3,555 rural firms, interviewed for the UK Small Business Survey in 2015. It cannot be explained or attributed to oft-rehearsed differences between rural and urban economies, as the analysis controlled for differences in sectors, size, age and other business characteristics of rural and urban areas.

Although rural and urban firms share many plans and expectations for future growth, rural firms were significantly stronger exporters of goods and services, were more likely to have introduced new or improved goods in their businesses, and were more able to secure external funds, especially for capital investments in machinery and buildings, than were businesses in urban England.

Nevertheless, there is also clear evidence of ***Untapped*** rural potential (for example, more rural firms have goods or services suitable for exporting than which currently export), ***Weaknesses*** (for example, rural firms are less likely to expect to grow their workforce) and ***Obstacles*** to business success, particularly Regulations or red tape, Staff recruitment and skills, and Taxes, rates and NI. that concern significantly more rural than urban firms.

The analysis also maps marked variations in these and other outcomes, activities and plans across England and its regions. So, to achieve spatially-balanced and inclusive economic growth, we would encourage central and local government agencies, Local Enterprise Partnerships and business support and representative organisations to examine this evidence, embed rural business' strengths and aspirations, and address weaknesses, in economic strategies, plans and support mechanisms.

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1. Introduction

Rural firms have often been a blind spot within economic policy and national and regional analyses, which typically only scratch the surface regarding their innovation practices, how successful they are at securing finance, business advice, selling overseas, or their aspirations and performance. Yet in 2015/16 they formed 22.5% of England's registered businesses, employed at least 3.9 million people and earned more than £237 billion (Defra, 2017). Given their importance, it is imperative that policy makers and business leaders and support bodies are more aware of their needs and circumstances so that economic and spatial strategies can effectively harness the full potential of businesses from all places and sectors. Many of the challenges faced by rural firms and opportunities to grow available to them may be similar to urban firms. But potentially they may play out differently in different regional or local geographies and economies. This rural story could result from the specific composition of rural economies in terms of the profiles of their business sectors, ages and sizes. In this report we further unpack these issues through analysis of the UK Longitudinal Small Business Survey (LSBS).

The LSBS was commissioned by the UK Government's Department of Business (BEIS) and Governments of Scotland, Wales and Northern Ireland. 15,500 small firms across the United Kingdom were interviewed in October-December 2015 about their recent performance, future plans and expectations. More than 13,403 interviewed firms' were based in England, of which 26.5% (3,555) operate from locations that are defined as 'rural' within the UK Government's rural-urban classification.

In this report we provide a rural-urban analysis of responses of firms in England and sub-national levels. As well as overall business performance (measured in terms of turnover and profit) we consider three key themes and features of business activity, including access, need and uses of external finance, innovation of products, services and processes, and exporting. Regrettably, the sample size of interviewed rural firms is such that a detailed analysis by Local Enterprise Partnership (LEPs) is not feasible. At this scale, sample sizes in some LEP areas was too small, and rural responses to several questions were too few, to provide statistically robust or useful rural answers for each of the LEPs. Accordingly, responses were allocated to the (former) Government Office Regions (GOR) allowing rural-urban analyses to reflect something of the diversity of England's rural economies (Table 1).

The analysis applies a variety of descriptive and explanatory statistical techniques to ensure: that results are robust and representative of the wider rural (and urban) business community; that principal and statistically-significant rural-urban differences can be identified; and that outputs will be useful to economic and rural decision makers and representatives, as well as those in public and commercial sectors who manage business development or support programmes and measures.

Throughout the report we use a simple colour scheme to convey the key findings. If a table cell is left unfilled, it means that there was no significant difference between the rates of rural or urban responses to the survey question. If a cell is coloured green, then rural positive responses were (statistically) significantly higher than those from urban firms. If a cell is filled with orange, the rural-urban balance is in favour of town and city firms, i.e. urban firms' response were significantly higher than rural firms on that question. In the report we apply the Chi-square (χ^2) test to analyse differences between rural and urban firms. The test identifies a significant difference in frequency between two groups based on the difference between the observed and expected frequency in each group (Bird and Sapp, 2004).

Table 1 LSBS responses by Government Office Region and Local Enterprise Partnership (LEPs*)

Region	Local Enterprise Partnership*	Number of Enterprises**	
		Urban	Rural
East Midlands	Derby, Derbyshire, Nottingham and Notti, Greater Cambridge & Greater Peterborough, Greater Lincolnshire, Leicester and Leicestershire, Northamptonshire, Sheffield City Region, South East Midlands	741	394
East of England	Greater Cambridge & Greater Peterborough, Hertfordshire, New Anglia, South East, South East Midlands	1,073	621
London***	Coast to Capital, London.	1,954	5
North East	North Eastern, Tees Valley.	322	111
North West	Cheshire and Warrington, Cumbria, Greater Manchester, Lancashire, Liverpool City Region,	1,148	252
South East	Coast to Capital, Enterprise M3, Oxfordshire LEP, Solent, South East, South East Midlands, Thames Valley Berkshire, Thames Valley, Buckinghamshire.	1,829	761
South West	Cornwall and the Isles of Scilly, Dorset, Gloucestershire, Heart of the South West, Swindon and Wiltshire, West of England.	1,054	795
West Midlands	Black Country, Coventry and Warwickshire, Greater Birmingham and Solihull, Stoke-on-Trent and Staffordshire, The Marches, Worcestershire.	904	328
Yorkshire & Humber	Greater Lincolnshire, Humber, Leeds City Region, Sheffield City Region, York and North Yorkshire.	823	288
Total		9,848	3,555

Notes:

* LEPs are mapped onto Government Office Regions. Some individual LEPs are listed in more than one region because responses were classified using the firms' postcodes, which can extend across regional administrative boundaries.

** The number of firms in Table 1 is unweighted. However, in Sections 2 and 4 of the report we applied BEIS weightings. To be able to adequately draw conclusions about medium sized businesses, the LSBS over-represents larger SMEs and under-represents microbusinesses and as such BEIS weights the sample to correct for this imbalance. The LSBS sample and subsequent adjustment were designed to provide national representative coverage of SMEs, and not for representativeness of the rural business population. The weighted sample that is used in the report is of 8,190 urban firms and 3,667 rural firms.

*** The analysis presented in this report excludes businesses located in London, a fairly regularly applied to remove the distorting influence of the London effect on urban responses.

This report is organised as follows. Section 2 provides a profile of the LSBS sample of rural and urban small businesses in England. Section 3 describes an overview of business performance for England and the regions, and introduces analysis of specific rural effects using Propensity Score Matching (PSM). Through the application of PSM the analysis aims to contribute to a long-standing debate as to whether there is a distinct 'rural effect' on business performance, or whether variations between the urban and rural industrial footprint (size, sector, age, etc.) account for any differences. Finally, in Section 4 the report considers the differences between rural and urban businesses' investment and finance, exporting and innovation across England and its regions.

2. Business Profile

A) Size and Sector

Of the total business stock, 30.9 per cent of the weighted responses in the LSBS are classified as rural (Table 2).

Table 2 Distribution of firm size and urban-rural classification as % total business stock

Firm size	Number of Enterprises		Total
	Urban	Rural	
No employees	6,361 (77.7%)	2,687 (73.3%)	9,048 (76.3%)
Micro 1 – 9	1,480 (18.1%)	828 (22.6%)	2308 (19.5%)
Small 10 – 49	300 (3.7%)	133 (3.6%)	433 (3.7%)
Medium 50 - 249	49 (0.6%)	19 (0.5%)	68 (0.6%)
Total	8,190	3,667	11,857**

Source: LSBS (2015)

** Excluding London. This is also the case for all following tables.

Shading denotes statistically significant response using Chi-square test (χ^2: p<0.05)

The distribution by grouped sections reveals that rural firms are more likely to be operating in *ABCDEF - Production and construction* and *GHI - Transport, retail and food service/accommodation* than the urban firms (Table 3). While more urban firms than rural firms operate in *JKLMN - Business services* (32.5% cf. 30.0%).

Table 3 Distribution of firms by broad sector and urban-rural classification

A3/A4. Broad sector	Number of Enterprises		Total
	Urban	Rural	
ABCDEF - Production and construction	2,095 (25.6%)	1,085 (29.6%)	3,180 (26.8%)
GHI - Transport, retail and food service/ accommodation	1,451 (17.7%)	775 (21.1%)	2,226 (18.8%)
JKLMN - Business services	2,660 (32.5%)	1,099 (30.0%)	3,759 (31.7%)
PQRS - Other services	1,984 (24.2%)	708 (19.3%)	2,692 (22.7%)
Total	8,190	3,667	11,857

Source: LSBS (2015): question A3/4 Broad Sector

Shading denotes statistically significant response using Chi-square test (χ^2: p<0.05)

B) Performance by profit and turnover

Focusing on the aggregate level performance data of England, two indicators were considered, namely turnover and profit. Rural firms in England show a higher probability of earning annual turnover of more than £82,000 compared to the urban firms (Table 4). Rural firms also show a higher probability of making a profit than the urban firms (79.3% cf 76.4%) (Table 5). However, this is likely to reflect a sector bias as the pattern is reversed using the PSM analysis (See section 3).

Table 4 Weighted distribution of firms by turnover and urban-rural classification

Annual turnover	Number of Enterprises		Total
	Urban	Rural	
Less than £82,000	5,279 (64.5%)	2,011 (54.8%)	7,290 (61.5%)
More than £82,000	1,938 (23.7%)	1,192 (32.5%)	3,130 (26.4%)
Don't know	247 (3.0%)	122 (3.3%)	420 (3.1%)
Refused	726 (8.9%)	342 (9.3%)	1,199 (8.8%)
Total	8190	3667	11,857

Source: LSBS (2015): question P1/B: annual turnover
Shading denotes statistically significant response using Chi-square test (χ^2<0.05).

Table 5 Weighted Distribution of firms by profit and urban-rural classification

Did you generate a profit or surplus?	Number of Enterprises		Total
	Urban	Rural	
Yes	6,258 (76.4%)	2,907 (79.3%)	9,165 (77.3%)
No	1,461 (17.8%)	536 (14.6%)	1,997 (16.8%)
Don't know	335 (4.1%)	126 (3.4%)	461 (3.9%)
Refused	136 (1.7%)	98 (2.7%)	234 (2.0%)
Total	8,190	3667	11,857

Source: LSBS (2015): question P12: did you generate a profit or surplus?
Shading denotes statistically significant response using Chi-square test (χ^2: p<0.05).

C) Age of business

Rural firms are more likely to be older than urban firms with 47.2 per cent of rural firms being more than 20 years, compared to 41.2 per cent of urban firms. Urban firms are more likely to be recently established than rural firms with 15.6 per cent of urban firms between 0-5 years old, compared to only 11.2 per cent of rural firms (Table 6).

Table 6 Weighted distribution of firms by age and urban-rural classification

Age of business	Number of Enterprises		Total
	Urban	Rural	
0 - 5 years	1,281 (15.6%)	410 (11.2%)	570 (4.8%)
6 - 10 years	1,527 (18.6%)	663 (18.1%)	2,190 (18.5%)
11 - 20 years	1,977 (24.1%)	857 (23.4%)	2,834 (23.9%)
More than 20 years	3,374 (41.2%)	1,732 (47.2%)	5,106 (43.1%)
Don't know	31 (0.4%)	6 (0.2%)	37 (0.3%)
Total	8,190	3,668	11,858

Source: LSBS (2015): question A6: age of business.
Shading denotes statistically significant response using Chi-square test (χ^2: p<0.05).

D) Family ownership

In rural and urban economies the overwhelming majority of firms are family owned. Table 7 shows no significant difference between rural and urban firms, though a slightly higher proportion of rural than urban firms have family majority ownership with 86.9 per cent and 85.9 per cent respectively.

Table 7 Weighted distribution of firms by family majority ownership and urban-rural classification

Family majority ownership	Number of Enterprises		Total
	Urban	Rural	
Yes	7,036 (85.9%)	3,185 (86.9%)	10,221 (86.2%)
No	1,122 (13.7%)	464 (12.7%)	1,586 (13.4%)
Don't know / refused	32 (0.4%)	18 (0.5%)	50 (0.4%)
Total	8,190	3,667	11,857

Source: LSBS (2015): question A12 Is your business a family owned business, that is one which is majority owned by members of the same family?
Shading denotes statistically significant response using Chi-square test (χ^2: p<0.05).

In summary, these profiles show that rural firms in England are more likely to operate in production and construction industries and less likely to operate in service sectors. Rural firms tend to be older than urban firms. Most rural and urban firms have family ownership. Rural firms display both higher annual turnover and higher generating a profit. This could potentially be explained by some differences in business composition, for instance in firms' ages, sizes and sectors, of rural and urban areas. These variables, rather than businesses' rural or urban location per se, have often been highlighted to explain any differences in performance between rural and urban areas.

3. Exploring a rural effect on performance using Propensity Score Matching (PSM)

Having discussed the sample context, we now seek to consider potential urban-rural differences in business performance that are independent of variations in the profile characteristics of firms (size, sector, age, etc.) (see Table 8). In order to do this, we use a Propensity Score Matching (PSM) to control for the latter variables. PSM is widely used to evaluate labour market policies and medical programmes. Empirical examples can be found in diverse fields where we need to observe outcomes of the same units in the presence or absence of a treatment

In this context, PSM is used to see whether differences in performance (measured by £turnover or profitability) and in use of information/advice support, across all responding firms, is conditional on whether a firm operates from a rural or urban location. Thus the rural location becomes the 'treatment' and all rural firms are in the treated group, whilst the urban firms are in the control (or non-treated) group. However, evaluating the causal effect of a treatment on a business outcome such as £turnover is complicated by the fact that we cannot observe the case in which a firm changes status from being classified as rural to it being located in an urban area (or vice-versa), so we do not observe the counter-factual situation of a rural firm's outcome had the firm not been rural but instead had it been urban (and vice-versa we do not observe the counter-factual for urban firms). Thus this weakness is addressed by constructing a statistical counter-factual. We do this by calculating firstly the propensity scores (which have a value from 0 to 1) based on a set of pre-treatment characteristics, i.e. the covariates, for both treated and control observations. The set of covariates used is listed in table 8.

A propensity score is a single score representing the probability of receiving a treatment, conditional on the set of observed covariates. Propensity scores allow us to balance a large number of covariates between two groups (in our case urban and rural firms) by balancing a single variable, the propensity score, avoiding the multidimensionality problem of balancing directly on covariates (Rosenbaum and Rubin, 1983). In other words propensity scores solve this dimensionality problem by compressing the

relevant factors into a single score, then comparing firms with similar propensity scores across a treatment group (in our case rural SMEs) and a control group (urban SMEs). In practice, the propensity score is most often estimated using a logistic regression model, in which treatment status (in our case a dummy equal to 1 if the firm is rural) is regressed on observed baseline characteristics. The estimated propensity score is the predicted probability of treatment derived from the fitted regression model. Thus, businesses located in rural areas are matched on the same probability to those located in urban areas and if a statistically significant difference in the chosen performance measure (turnover and profit) and use of support is found, then this can be attributed to the treatment, which in our case is the 'rural effect'.

To identify the determinants of England's rural businesses, 11,188 businesses from LSBS 2015 were included in an estimation, excluding businesses located in London because of the distorting influence of the London effect on urban responses. The explanatory variables[1] that are included in the estimation are shown in Table 8 with Appendix 1 providing a detailed explanation of the PSM procedure.

Table 8 Definition of the Variables used for Analysis

Variable	Definition	Description
Treatment variable		
RURAL	Business is located in rural areas	1=Yes; 0=otherwise
Explanatory variables		
SECTOR	Business sector	Categorical
lnTOTEMP	Natural logarithm of total employment, including employees, owners and business partners[2]	Continuous (Number of employees, owners and partners)
AGEB	Age of business	Discrete (year bands)
UNREG	The status of business registration	1=Unregistered; 0=otherwise
SOTRAD	Sole trader	1=hiring employees; 0=otherwise
lnEMAGE	Natural logarithm of the interaction between total employment and business's age	Continuous
lnEMSECT	Natural logarithm of the interaction between total employment and sector	Continuous
Outcome variables		
TURNOVER	Total annual turnover[3]	Continuous (Pounds)
PROFIT	Profitability	1=Yes; 0=otherwise
SUPPORT	Use of information or advice in the last 12 months	1=Yes; 0=otherwise

Table 9 shows results of the logistic regression performed on the covariates (or explanatory variables) of all firms that have an impact on businesses located in rural areas. Rural areas are more likely to

[1] The explanatory variables that are associated with both treatment and outcomes, see Sianesi (2004) and Smith and Todd (2005).

[2] We take the natural logarithm (ln) to improve the normality distribution and balance of the variable.

[3] TURNOVER is adjusted by using the information from two questions in the LSBS survey. We constructed turnover by keeping the variable coded P1_2015 (turnover over the last 12 months) where available, and recovering the information from the variable coded P1B_2015 (the turnover bands over the last 12 months) where firms did not want to give a precise figure for turnover but disclosed which band the turnover was falling into, so the mid-point of the band was taken for these firms.

have older firms and sole traders than urban areas, whilst unregistered businesses are less likely to be located in rural than in urban areas

Table 9 Estimate of Probability of Small Businesses located in Rural Areas in England using a Logistic Regression

Variable	Model	
	Coefficient	**SE**
Constant	-0.579***	0.202
SECTOR	-0.071***	0.010
lnTOTEMP	-0.105	0.085
AGEB	0.065***	0.022
UNREG	-0.555***	0.079
SOTRADF	0.180**	0.070
lnEMAGE	-0.006	0.009
lnEMSECT	0.006*	0.003
Number of Observations	**11,188**	
Correctly classified	**69.41%**	
Pusedo-R^2	**0.018**	

Notes: *, **, *** denote significance at 10%, 5% and 1%, SE is standard errors.
Primary sector is not include in SECTOR because it contributes to an insignificant estimate.

Based on this model, the propensity score is calculated by matching the predicted probability of each variable in the treated group (rural) with that in the control group (urban). The impact of the difference between rural and urban businesses on turnover, profit and support is estimated given the set of matched variables. A balancing test is then performed for these estimated models in which the balancing test is satisfied when there is no significant difference on the variance ratio[4] for all variables (see Table A.1 – A.3) (Grilli and Rampichini, 2011). By doing this we ensure an extremely robust comparison between rural and urban businesses that have been matched on key variables.

Having controlled for these influential structural variables, Table 10 shows that firms operating from a rural area of England – after controlling for sector, registration status, age, etc differences in England's rural and urban economies. – have lower business performance, when measured in terms of £turnover. However, whilst they may have lower turnover, England's rural businesses are more likely to have a higher profit than England's urban businesses. There are a range of possible reasons for this pattern of lower turnover and higher profit that require further investigation. These could include, for example: a) rural wage levels are lower in many areas than in urban areas, partly because of poorer choice of jobs, and more seasonal or part-time work, resulting in lower costs for labour; b) rural firms may have higher % of home-based businesses than urban firms, thus less fixed costs related to business premises; c) rural firms operating from business premises in local markets with limited competition will have lower rents than urban markets with greater competition, and many small rural firms may access mandatory or discretionary business rate reliefs, so lower premises-related expenditure; d) sparser population densities in rural areas mean the size of local markets will on average be smaller, but at the same time there may be less local competition; and e) family-owned firms may take more non-monetary or wage benefits from revenue than corporately-owned firms. In short, outgoings are likely to be lower for many rural firms compared with their urban equivalents and

[4] The variance ratio is a statistical test that is used to show how effectively the treatment is balancing the covariates. Tables A.1 – A.3 show that variance ratios are similar, implying that all covariates are balanced.

low competition and flexibility of business and owner relationships may enable a higher proportion of their revenue to be classed as surplus or profit;

Firms' use of information or advice in the last 12 months presents no statistically significant urban: rural differences in this PSM analysis. This may be because the variable used is very broadly framed as encompassing all types of information and advice sought.

Table 10 Impact of Rural Small Businesses on Outcomes[5]

Matching technique	£Turnover	Profit	Support
	ATT (SE)	ATT (SE)	ATT (SE)
PSM	-358,894.1** (169,737.7)	0.019** (0.009)	0.019 (0.012)
Nearest Neighbour (5)	-157,509.6 (126832)	0.020** (0.008)	.022 (0.011)
Caliper (0.2)	-358,894.1** (169,737.7)	0.019** (0.009)	0.019 (0.012)

Notes: *, **, *** denote significance at 10%, 5% and 1%, SE is standard errors

Table 9 uses 3 different matching techniques which all demonstrate statistical significance and direction of outcome relationship, with similar variations in magnitude.

Below the national level, we also applied the PSM technique to analyse differences in performance between rural and urban firms for each region. As shown in Table 11, most regions display no significant differences in firms' £turnover or profit/loss, nor in levels of use of external advice between urban and rural firms. However, Yorkshire & Humbers' rural firms have significantly higher £turnover than that region's urban firms, while North West's rural firms have significantly lower £turnover than its urban firms. South West's rural firms have higher levels of profitability than the region's urban firms. Additionally, rural firms in West Midlands and Yorkshire & Humber are more likely to seek advice or information than the regions' urban firms.

[5] The impact of rural businesses on outcomes including London areas is shown in Table A.20 in which the results are similar to that without London.

Table 11 Impact of Rural Small Businesses on Outcomes using Propensity Score Matching – regional variations

Region	Turnover (SE)	Profit (SE)	Support (SE)
East Midlands	241,385.7 (432,782.2)	0.042 (0.030)	-0.019 (0.041)
East of England	326,146.9 (346,847.4)	0.018 (0.029)	-0.030 (0.032)
North East	-957,183.6 (1,055,004)	-0.098 (0.061)	-0.003 (0.077)
North West	-1,319,083** (597,460.8)	-0.000 (0.036)	-0.032 (0.048)
South East	(591,08.97) (283,576.1)	(0.013) (0.021)	-0.007 (0.029)
South West	-133,465 (237,409.3)	0.038* (0.023)	0.016 (0.030)
West Midlands	269,720.7 (551,853.4)	0.019 (0.036)	0.081** (0.041)
Yorkshire & Humber	1,020,028* (588,056.3)	0.022 (0.031)	0.079* (0.045)

Note: ** and * are statistically significant at 5% and 10% respectively

4. Rural business investment and external finance, exporting and innovation

In this section, we explore some of the key drivers of change within rural and urban businesses through three themes, namely investment and external finance, exporting, and innovation. We describe some of the statistically significant differences between rural and urban firms for England as a whole, and for the former Government Office Regions.

Two of our themes, Capital investment and Innovation (or development of new products/services), are represented in Table 12. Firms participating in the LSBS were asked about their improvement or development plans for the next three years and were presented with five specific plans, plus an option of None of these. Both rural and urban firms show the greatest level of commitment to *Increase the skills of the workforce* with 46.1 per cent for rural and 46.9 per cent for urban firms. Only firms' plans to make *Capital investment (in premises, machinery etc.)* achieved significant urban: rural differences, with England's rural firms being more likely to make such investments than urban firms (30.7% cf 25.5%).

There was also regional variation in such planned improvements Table A.4). So, for example, in the West Midlands 56.5 per cent of rural firms say that they plan to improve their workforce's skills compared to 46.3 per cent of urban firms (Table A.4). It may be a concern for business development agencies that 36.8 percent of the small firms do not plan to make any of the five specified improvements (though only 20.0 per cent of rural firms in North East England reported that they had no plans, which may be a source of encouragement).

Table 12 Plans for next three years - England

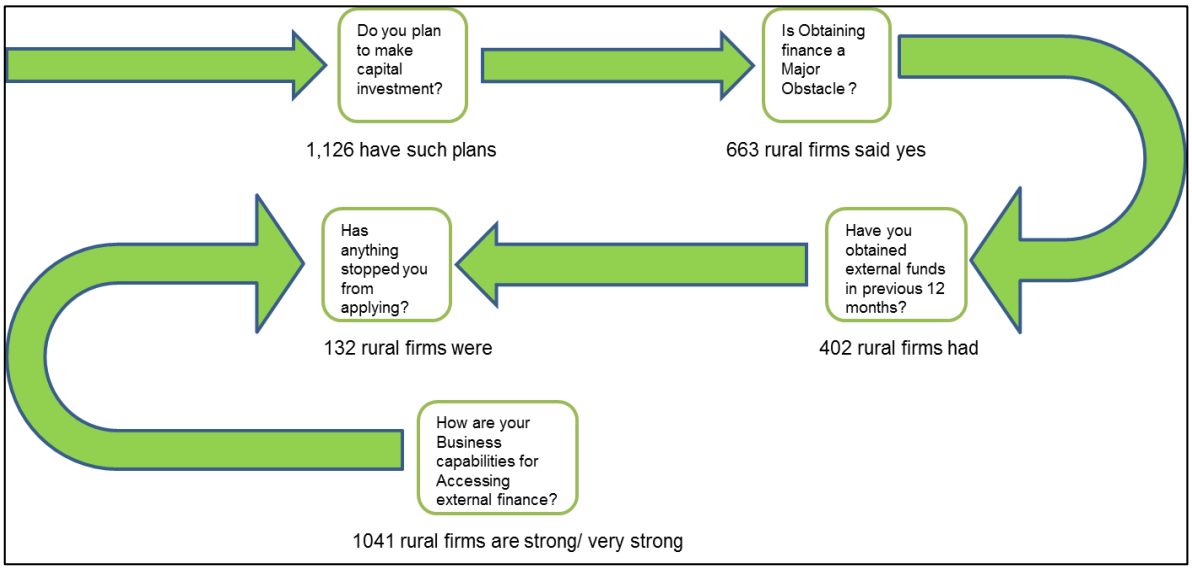
Plans over next three years	Number of Enterprises		Total
	Urban	Rural	
Increase the skills of the workforce	3,839 (46.9%)	1,691 (46.1%)	5,530 (46.6%)
Increase the leadership capability of managers	1,846 (22.5%)	871 (23.8%)	2,717 (22.9%)
Capital investment (in premises, machinery etc.)	2,090 (25.5%)	1,126 (30.7%)	3,216 (27.1%)
Develop and launch new products/services	2,834 (34.6%)	1,279 (34.9%)	4,113 (34.7%)
Introduce new working practices	2,630 (32.1%)	1,162 (31.7%)	3,792 (32.0%)
None of these	3,054 (37.3%)	1,314 (35.8%)	4,368 (36.8%)

Source LSBS (2015): question R4: Does your business plan to do any of the following over next three years? Shading denotes statistically significant response using Chi-square test (χ^2<0.05).

4.1 Investment and external finance

Throughout the survey several questions were asked that related to the core theme of investment and external finance, which we believe can be considered together for a more holistic analysis (Figure 1), even though rates of response for each question are independent of one another. Some of the questions are about past performance or activity and business capabilities, whilst others are about future plans. If firms plan future improvements, it is reasonable to consider whether there are indications of likely success, or barriers, from their capabilities and past experiences. For each question in Figure 1, the numbers of usable rural responses at national level are indicated, so that this can show the scale and usefulness of the analysis. Response rates for each question are independent of one other (for example in Figure 1 the 663 firms that identify finance as an obstacle are not a subset of the 1,126 firms that plan to make a capital investment). The small sample sizes for some questions highlights the difficulties of producing sub-national urban-rural analysis (say for individual LEPs).

Figure 1 Investment and finance trail



Source: LSBS (2015)

A) Plan to make capital investment

Differences between rural and urban responses were statistically significant for only one of the improvement plans in Table 12 - *Capital Investment (in premises, machinery etc.)* - a higher proportion

of rural than urban firms in England plan to make such investments in the next three years. There is also variation at regional level. More rural firms than urban firms in four regions, West Midlands, Yorkshire & Humber, South East and South West, plan to make investments of a capital nature in premises, machinery or fixed equipment.

B) Is Obtaining finance a major obstacle?

It is reasonable to assume that some of those firms planning capital investments or other activities will need external financing. In the survey firms were asked about the potential barriers or obstacles to successful running of their business. Obtaining finance was one of these barriers on which firms' views were sought.

Across England the obstacles most frequently identified by rural firms were: *Regulations/ red tape*, with *Competition in the market*, Staff r*ecruitment and skills of employees*, *Tax/NI/Rates and Late payments* also featuring strongly (Table 13). *Competition in the market* was the lead obstacle cited by urban firms with 46.3 per cent, significantly less of a barrier for rural firms (40.0 per cent)

Although Obtaining finance was not perceived as a leading barrier for rural (or urban firms), 663 of England's rural firms said it was. Moreover rural firms in the North East and South West were significantly more likely to report Obtaining finance as a barrier to business success, than their regions' urban businesses (40.6% cf 21.9% for North East, and 21.1% cf 16.4% for South West) (Table A.5). Additionally rural firms in these regions were also significantly more likely than urban firms to describe Tax/NI/Business rates, and Late Payment as major obstacles to business success. This suggests that rural firms in these regions have broader financial challenges than just Obtaining external funds.

Table 13 Major obstacles to businesses in general at the England level

Major obstacles to businesses	Number of Enterprises		Total
	Urban	Rural	
Obtaining finance	1,375 (16.8%)	663 (18.1%)	2,038 (17.2%)
Taxation, VAT, PAYE, National Insurance, business rates	2,297 (28.0%)	1,157 (31.6%)	3,454 (29.1%)
Staff recruitment and skills	1,348 (16.5%)	718 (19.6%)	2,066 (17.4%)
Regulations/red tape	2,841 (34.7%)	1,671 (45.6%)	4,512 (38.1%)
Availability/cost of suitable premises	1,295 (15.8%)	534 (14.6%)	1,829 (15.4%)
Competition in the market	3,788 (46.3%)	1,476 (40.2%)	5,264 (44.4%)
Workplace pensions	898 (11.0%)	409 (11.2%)	1,307 (11.0%)
Late payment	2,239 (27.3%)	1,037 (28.3%)	3,276 (27.6%)
Any other major issues or obstacles	943 (11.5%)	479 (13.1%)	1,422 (12.0%)
None of these	1,634 (20.0%)	594 (16.2%)	2,228 (18.8%)

Source: LSBS (2015): question G4 which of the following would you say are major obstacles to the success of your business in general?

Shading denotes statistically significant response using Chi-square test (χ^2<0.05).

C) Have you sought external funds?

Overall around 10 -11% of England's small firms had sought funds from external sources in the year preceding the 2015 LSBS interview (Table 14). No significant rural-urban differences were identified at country or regional level for this question, with the exception of South East England where a significantly higher share of urban firms had sought such funds (Table A.6).

Table 14 Businesses External Finance obtained at the England level

Have you tried to obtain external finance for your business in the past 12 months?	Number of Enterprises		Total
	Urban	Rural	
Yes	880 (10.7%)	402 (11.0%)	1,282 (10.8%)
No	7,259 (88.6%)	3,251 (88.6%)	10,510 (88.6%)
Don't know	45 (0.5%)	11 (0.3%)	56 (0.5%)
Total	8,190	3,668	11,858

Source: LSBS (2015), H4: Have you tried to obtain external finance for your business in the past 12 months? Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05).

D) Reasons for seeking external finance

For those firms who had sought financing, the LSBS also asked about the reasons for seeking finance. Whilst there was limited country or regional difference in the share of rural and urban firms that sought external funding, there are marked rural-urban differences in the intended uses of external finance. The largest single use or reason from both urban and rural firms was *Working capital or cashflow* with significant urban bias (43.6 per cent of rural firms cf 52.3 per cent of urban firms (Table 15). However, looking across the range of reasons with significant rural-urban differences Table 15 suggests that urban firms are more likely to seek external funds for regular operational or ongoing business improvements – eg. *Cashflow, Marketing, Research and development, Training/staff development*, whilst most rural firms sought funds for capital investments or funding improvements for capital items.

Table 15 Reasons for seeking external finance-England

Reason for seeking finance	Number of Enterprises		Total
	Urban	Rural	
Working capital, cashflow	460 (52.3%)	175 (43.6%)	635 (49.6%)
Buying land or buildings/building premises	76 (8.6%)	76 (19.0%)	152 (11.9%)
Improving buildings	49 (5.6%)	37 (9.2%)	86 (6.7%)
Acquiring capital equipment or vehicles	317 (36.1%)	166 (41.3%)	483 (37.7%)
Research & Development	45 (5.1%)	6 (1.5%)	51 (4.0%)
Acquiring intellectual property	11 (1.3%)	1 (0.2%)	12 (0.9%)
Protecting intellectual property	9 (1.0%)	0 (0.0%)	9 (0.7%)
Training/staff development	25 (2.8%)	2 (0.5%)	27 (2.1%)
Buying another business	3 (0.3%)	2 (0.5%)	5 (0.4%)
Marketing	46 (5.2%)	6 (1.5%)	52 (4.1%)
Debt consolidation	24 (2.7%)	3 (0.7%)	27 (2.1%)
Moving premises	5 (0.6%)	3 (0.7%)	8 (0.6%)
To fund expansion in the UK	45 (5.1%)	16 (4.0%)	61 (4.8%)
To fund expansion overseas	11 (1.3%)	1 (0.2%)	12 (0.9%)
Hiring staff	20 (2.3%)	3 (0.7%)	23 (1.8%)
Start up business/in order to start trading	28 (3.2%)	6 (1.5%)	34 (2.7%)
Management buy out/buy in (MBO/MBI)	11 (1.3%)	2 (0.5%)	13 (1.0%)
Business recovery	26 (3.0%)	2 (0.5%)	28 (2.2%)
Other	95 (10.8%)	49 (12.2%)	144 (11.3%)
Don't know	32 (3.6%)	3 (0.7%)	35 (2.7%)
Total	879	401	1,280

Source: LSBS (2015), H8A: On the most important of these occasions in the last 12 months, what did you try to obtain finance for? Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

The significantly higher intended use of external finance for capital investments among rural firms could be attributed to rural economies' stock of farming, forestry and allied businesses with their dependency on expensive land, buildings and machinery. Consequently, we sought to explore if such a sectoral bias exists.

To test for such a sectoral effect, responses from these primary sector industries were excluded from the analysis (Table 16). Although this re-analysis levelled or eradicated the (rurally) significant response in relation to *Acquiring capital equipment or vehicles*, rural responses remained significantly higher than urban firms' for other capital purposes,. So this significant difference in rural and urban firms' intentions for external funds for capital funding cannot to be simply attributed to rural areas' land-dependant industries (Table 16).

Table 16 Reasons for seeking finance: - England without Land industries

Reasons for seeking finance	Number of Enterprise		Total
	Urban	Rural	
Working capital, cashflow	456 (52.2%)	138 (42.1%)	594 (49.4%)
Buying land or building/building premises	76 (8.7%)	52 (15.9%)	128 (10.6%)
Improving building	49 (5.6%)	30 (9.1%)	79 (6.6%)
Acquiring capital equipment or vehicles	312 (35.7%)	120 (36.6%)	432 (35.9%)
Research and Development	45 (5.1%)	6 (1.8%)	51 (4.2%)
Acquiring intellectual property	11 (1.3%)	1 (0.3%)	12 (1.0%)
Protecting intellectual property	9 (1.0%)	0 (0.0%)	9 (0.7%)
Training/staff development	25 (2.9%)	2 (0.6%)	27 (2.2%)
Buying another business	3 (0.3%)	2 (0.6%)	5 (0.4%)
Marketing	46 (5.3%)	6 (1.8%)	52 (4.3%)
Debt consolidation	24 (2.7%)	1 (0.3%)	25 (2.1%)
Moving premises	5 (0.6%)	3 (0.9%)	8 (0.7%)
To fund expansion in the UK	45 (5.1%)	12 (3.7%)	57 (4.7%)
To fund expansion overseas	11 (1.3%)	1 (0.3%)	12 (1.0%)
Hiring staff	20 (2.3%)	3 (0.9%)	23 (1.9%)
Start up business/in order to start trading	28 (3.2%)	6 (1.8%)	34 (2.8%)
Management buy out/buy in (MBO/MBI)	11 (1.3%)	1 (0.3%)	12 (1.0%)
Business recovery	26 (3.0%)	2 (0.6%)	28 (2.3%)
Other	93 (10.6%)	43 (13.1%)	136 (11.3%)
Don't know	32 (3.7%)	2 (0.6%)	34 (2.8%)
Total	874	328	1,202

Source: LSBS (2015), H8A: On the most important of these occasions in the last 12 months, what did you try to obtain finance for? Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

E) External funds secured

Those firms which had secured external funds were asked to identify the type of finance used and how much they had secured on their last occasion. The findings reinforce the contrasting pattern of finance needs for rural (i.e. for capital investments) and urban (i.e. smaller revenue expenditure for ongoing business improvements) businesses.

At the time of the survey, most small firms were using *Bank overdrafts*, C*redit cards*, and *Loan from a bank, building society or other financial institution* (Table 17). Approximately 42 per cent of Bank overdrafts are used by both rural and urban firms. A higher percentage of rural than urban firms use *Loan from a bank, building society or other financial institution, Leasing or hire purchase,* and *Commercial*

mortgage with 34.2 per cent and 30.6 per cent, 27.3 per cent and 23.2 per cent, and 12.6 per cent and 6.5 per cent respectively.

Table 17 Types of Finance currently being used-England

Types of Finance	Number of Enterprises		Total
	Urban	Rural	
Bank overdraft	796 (41.9%)	428 (41.8%)	1224 (41.8%)
Commercial mortgage	124 (6.5%)	129 (12.6%)	253 (8.6%)
Credit cards	733 (38.6%)	407 (39.7%)	1140 (39.0%)
Equity Finance (including peer to peer/ crowd funding, business angels, venture capital, equity from shareholders)	72 (3.8%)	38 (3.7%)	110 (3.8%)
Factoring/invoice discounting	67 (3.5%)	32 (3.1%)	99 (3.4%)
Leasing or hire purchase	441 (23.2%)	280 (27.3%)	721 (24.6%)
Loan from a bank, building society or other financial institution	581 (30.6%)	351 (34.2%)	932 (31.9%)
Mezzanine finance	8 (0.4%)	9 (0.9%)	17 (0.6%)
Peer to peer /crowd funding platform for debt	39 (2.1%)	18 (1.8%)	57 (1.9%)
Public equity (e.g. issue of shares on public market)	6 (0.3%)	6 (0.6%)	12 (0.4%)
Charitable/ Trust/ Grant	49 (2.6%)	37 (3.6%)	86 (2.9%)
Government schemes	50 (2.6%)	5 (0.5%)	55 (1.9%)
Other loans (inc personal finance)	44 (2.3%)	20 (1.9%)	64 (2.2%)
Other finance	60 (3.2%)	15 (1.5%)	75 (2.6%)
None of these	327 (17.2%)	163 (15.9%)	490 (16.7%)
Don't know	4 (0.2%)	0 (0.0%)	4 (0.1%)

Source: LSBS (2015), H6: Are you currently using any of these types of finance?
Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

Looking at the regions (Table A.7), significantly higher proportions of rural firms used Loans, Credit cards, or Leasing/HP agreements in the North West. Rural firms in the South East were significantly more likely to use Leasing/HP agreements than their urban firms, and in the South West and East of England Loans from banks, building societies and similar institutions were especially important for rural firms. Rural firms across England were also greater users of Commercial mortgages, than urban firms, with significant rural-urban differences in four regions, namely North West, East of England, South West and South East.

Turning to the amounts of external funds raised by rural and urban firms in England (Table 18), we found that 70%of urban firms had secured amounts up to £25,000 on their last successful approach to external funders, whilst this scale of external finance only accounted for around half (51.6%) of rural firms' successful forays to financial sources. Significantly higher levels of urban firms in England, and in the North East, North West, East Midlands and South East regions, secured this level of external finance (Table A.8). In contrast, England's rural firms who secured external finance, obtained more considerable funds. Nearly a quarter of rural firms (23.5%) secured between £100,000 and £2million, contrasting with just over 1 in 8 (11.6%) urban businesses who secured such amounts. Thus, in the same four regions the proportion of rural firms obtaining such larger amounts reaches 30-50 per cent, several % points higher than their urban firms' experience (though the number of responses are small and should be treated with caution).

Table 18 Amount of Finance obtained: Rural-urban Classification - England

Amount of Finance obtained	Number of Enterprises		Total
	Urban	Rural	
Less than £24,999	451 (69.6%)	169 (51.5%)	620 (63.5 %)
£25,000 to £99,999	95 (14.7%)	57 (17.4%)	152 (15.6%)
£100,000 to £1,999,999	67 (10.3%)	77 (23.5%)	144 (14.8%)
£2 million or more	9 (1.4%)	4 (1.2%)	13 (1.3%)
Don't know	6 (0.9%)	4 (1.2%)	10 (1.0%)
Refuse	20 (3.1%)	17 (5.2%)	37 (3.8%)
Total	648	328	976

Source: LSBS (2015), H9F: How much finance did you obtain in the last 12 months?
Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05).

F) Discouragement of finance (Has anything stopped you applying for finance?)

Businesses that had secured funds were also asked if anything had put them off applying for finance. This is an important question because whereas 10-11 per cent of England's small firms had secured external funding, around 8 per cent of firms had indicated they needed more than they had secured. Our rural-urban analysis suggests a marked urban challenge, with significantly more businesses in urban locations answering this question affirmatively than rural firms, both at England level, and in the North East, Yorkshire & Humber and East Midlands regions. Approximately 60 per cent of urban firms were discouraged from applying for finance compared with 48 per cent of rural firms at the England level (Table 19). In North East region, this was 90.3 per cent of urban firms, in the East Midlands 65.8 per cent of urban firms and in Yorkshire & Humber's 64.1 per cent (Table A.9). The main reasons for discouragement reflect in part the attitude to risk of would-be applicants, but also their perception of the financial market place, ie "Expected to be rejected, Take too long for a decision or, Too much hassle" (Table 20).

Table 19 Businesses stopped applying for finance-England

Whether anything stopped them from applying for finance	Number of Enterprises		Total
	Urban	Rural	
Yes	399 (59.9%)	124 (47.5%)	523 (56.4%)
No	244 (36.6%)	133 (51.0%)	377 (40.7%)
Don't know	23 (3.5%)	4 (1.5%)	27 (2.9%)
Total	666	261	927

Source: LSBS (2015), H97: if any reason for not applying for finance?
Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

Table 20 Main reason for discouragement-England

Main reason for discouragement	Number of Enterprises		Total
	Urban	Rural	
You thought you would be rejected	111 (18.2%)	52 (16.6%)	163 (17.1%)
You thought it would be too expensive	72 (10.8%)	34 (11.9%)	106 (11.1%)
You don't want to take on additional risk	182 (27.3%)	77 (27.0%)	259 (27.2%)
Now is not the right time because of economic conditions	62 (9.3%)	10 (3.5%)	72 (7.6%)
You didn't know where to find the appropriate finance you needed	29 (4.3%)	4 (1.4%)	33 (3.5%)
Poor credit history	68 (10.2%)	32 (11.2%)	100 (10.5%)
The decision would have taken too long/too much hassle	41 (6.1%)	29 (10.2%)	70 (7.4%)
Other	80 (12.0%)	34 (11.9%)	114 (12.0%)
Don't know	20 (3.0%)	8 (2.8%)	28 (2.9%)
Total	667	285	952

Source: LSBS (2015), H97: if any reason for not applying for finance?
Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

G) Capability to obtain finance

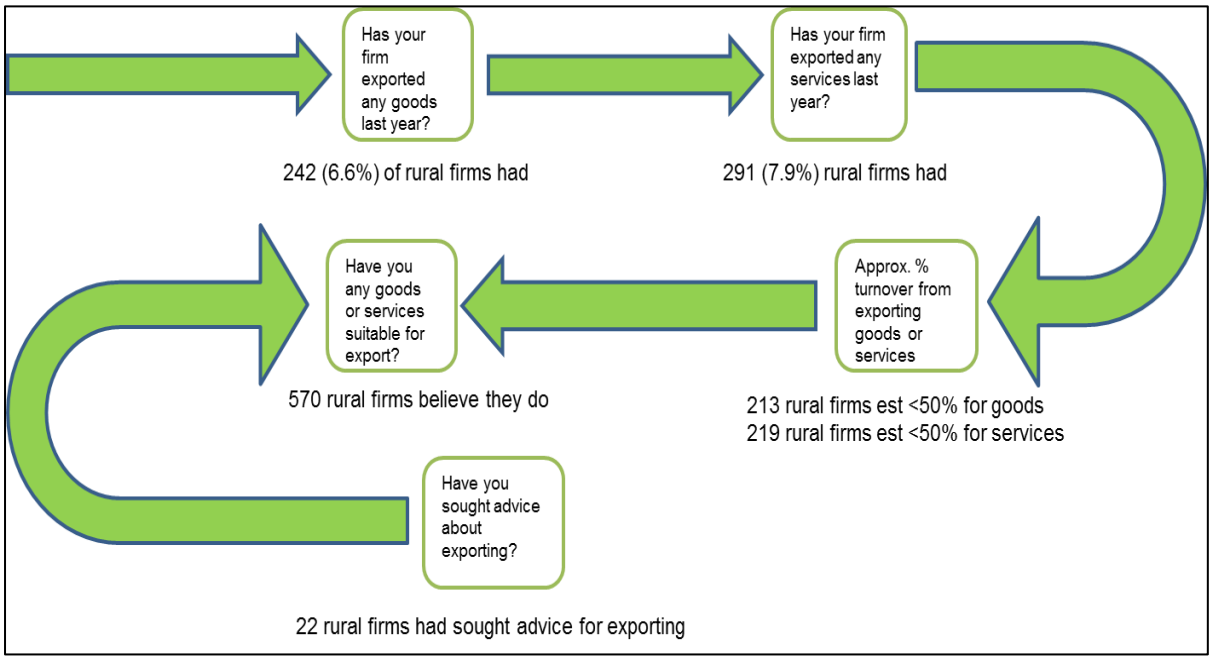
Firms were asked to rate their business capabilities using a 5-point scale where 1 = Very Poor and 5 = Very strong, relative to five business drivers or management skills. These included Accessing external finance. Across England as a whole, significantly more managers of rural than urban small firms considered that they had strong or very strong business capabilities in accessing external finance (Table A.10). Thus, approximately 13.5 per cent and 14.9 per cent of rural firms had very strong and strong business capabilities in accessing external finance compared to 12.0 per cent and 12.6 per cent of urban firms respectively. In South East, South West, and West Midlands, significantly more managers of rural than urban small firms feel that they had strong or very strong business capabilities in accessing external finance (Table A.11). More rural than urban firms in East Midlands and North East had very strong capabilities in accessing external finance (18.1% cf 6.9% and 18.8% cf 15.1% respectively).

4.2 Exporting

Recent decisions about the UK's future relationships with key trading blocks, are likely to elevate business demand for support from LEPs and other agencies on exporting. Firms' recent exporting performance and challenges might offer a useful baseline of evidence. As with the section above in which we brought together answers to several questions related to access and use of finance, in this section we draw upon answers to several questions relating firms' experience of exporting goods and services (Figure 8)

In the 12 months prior to 2015 LSBS survey, around 7 per cent of rural firms (242) and 5 per cent of urban-based businesses (419) had exported goods from the UK. A larger number of rural (291) and urban (579) firms had exported services (Figure 8). Most of these firms exported goods OR services, but the LSBS identified that 71 of these rural firms and 116 of these urban businesses exported goods AND services.

Figure 8 Exporting trail



Source: LSBS (2015)

Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05

A) Exporters of Goods

Table 21 presents an overview of England's small businesses exporting goods beyond the UK. The higher proportion of rural than urban firms exporting goods is statistically significant for England as a whole (6.6% of rural firms compared to 5.1% of urban firms), and more rural firms in South West England were exporters of goods than those in the region's urban places with 8.7 per cent for rural firms and 4.7 per cent for urban firms (Table A.12).

Table 21 Exporting Goods by Rural and Urban businesses - England

Whether export goods	Number of Enterprises		Total
	Urban	Rural	
Yes	419 (5.1%)	242 (6.6%)	661 (5.6%)
No	7,767 (94.8%)	3,419 (93.2%)	11,186 (94.3%)
Don't know	3 (0.0%)	6 (0.2%)	9 (0.1%)
Total	8,189	3,667	11,856

Source: LSBS (2015), C1: in the past 12 months did your business export any services outside of the UK: Rural-Urban England?

Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

B) Service Export

Table 22 presents an overview of small firms exporting services in England. England's rural firms were also more likely to have exported services in the year to end 2015 than had the country's urban businesses. The rural-urban difference was statistically significant for England and in West Midlands. Approximately 8 per cent of rural firms export their services compared to 7 per cent of urban firms (Table 22). Also, 8.9 per cent of rural firms in West Midlands are more likely to export services compared to 4.4 per cent of urban firms (Table A.13).

Table 22 Service Export of Rural and Urban businesses-England

Whether export services.	Number of Enterprises		Total
	Urban	Rural	
Yes	579 (7.1%)	291 (7.9%)	870 (7.3%)
No	7,596 (92.8%)	3,359 (91.6%)	10,955 (92.4%)
Don't know	14 (0.2%)	17 (0.5%)	31 (0.3%)
Total	8,189	3,667	11,856

Source: LSBS (2015), C1: in the past 12 months did your business export any services outside of the UK?
Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

Exporting businesses were asked to estimate how much revenue they had derived from their exports, and answers are presented in bands of percentage of £turnover (Table 23 and Table 24). Estimates of the proportion of firms' £turnover generated by exported services were generally higher than the contributions made by exported goods to their firms' £turnover. Across England, around 35 per cent of service exporting rural firms' estimated their contribution to be more than half (from up to 50% to more than 90%) of business turnover, compared with only 19 per cent of rural firms that exported goods that estimated this scale of contribution to their revenue. Businesses that export services are therefore likely to earn a higher proportion of their turnover than earned from exported goods.

Table 23 Percentage of turnover for service exports - England

Percentage of turnover for service exports	**Number of Enterprises**		**Total**
	Urban	**Rural**	
Up to 5% of turnover	201 (34.7%)	120 (41.4%)	321 (36.9%)
Up to 10%	83 (14.3%)	42 (14.5%)	125 (14.4%)
Up to 25%	65 (11.2%)	20 (6.9%)	85 (9.8%)
Up to 50%	82 (14.2%)	37 (12.8%)	119 (13.7%)
Up to 75%	34 (5.9%)	20 (6.9%)	54 (6.2%)
Up to 90%	41 (7.1%)	15 (5.2%)	56 (6.4%)
More than 90%	63 (10.9%)	30 (10.3%)	93 (10.7%)
Don't know	10 (1.7%)	6 (2.1%)	16 (1.8%)
Total	579	290	869

Source: LSBS (2015), C1a/B. Percentage of turnover for service exports.
Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

Table 24 Percentage of turnover for goods exports - England

Percentage of turnover for goods exports	**Number of Enterprises**		**Total**
	Urban	**Rural**	
Up to 5% of turnover	220 (52.6%)	122 (50.4%)	342 (51.8%)
Up to 10%	48 (11.5%)	48 (19.8%)	96 (14.5%)
Up to 25%	44 (10.5%)	18 (7.4%)	62 (9.4%)
Up to 50%	37 (8.9%)	25 (10.3%)	62 (9.4%)
Up to 75%	23 (5.5%)	11 (4.5%)	34 (5.2%)
Up to 90%	23 (5.5%)	5 (2.1%)	28 (4.2%)
More than 90%	12 (2.9%)	6 (2.5%)	18 (2.7%)
Don't know	11 (2.6%)	7 (2.9%)	18 (2.7%)
Total	418	242	660

Source: LSBS (2015), C1a/B. Percentage of turnover for good exports.
Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

C) Exporting potential

Table 25 shows an overview of England small businesses that are a potential exporter. Firms were asked whether they had goods or services suitable for exporting. As reported in the previous section, significantly more rural firms believe that they have suitable products or services, than those firms in England's urban areas. Interestingly, the numbers of such potential rural exporters were also more than the numbers of rural firms who had exported goods and/or services, signalling latent export potential (representing potentially an additional 23% of rural exporters[6]). Rural firms are therefore significantly more likely to be exporters of goods and services and have goods or services suitable for exporting, than businesses operating from England's towns and cities. Export orientation is therefore another indicator of the important contribution of rural economies that can be recognised and built upon by support agencies.

In Table 25, England's rural firms are more likely to be a potential exporter than urban firms with 18.3 per cent and 15.0 per cent respectively. When responses to this question were analysed for rural-urban differences in the regions, significantly more rural firms in North West and South West England believe they had goods or services suitable for exporting. In North West, for example this amounted to 41 rural firms, or 17% of responding rural firms, contrasting with only 18 rural firms who exported goods or services from this region in 2014-15 (Table A.14).

Table 25 Export Potential of Small Businesses in England

Does your business have any goods or services that are suitable for exporting?	Number of Enterprises		Total
	Urban	Rural	
Yes	1,055 (15.0%)	570 (18.3%)	1,625 (16.1%)
No	5,927 (84.5%)	2,519 (81.1%)	8,446 (83.5%)
Don't know	28 (0.4%)	17 (0.5%)	45 (0.4%)
Refused	1 (0.0%)	1 (0.0%)	2 (0.0%)
Total	7011	3107	10,118

Source: LSBS (2015), C6: Does your business have any goods or services that are suitable for exporting?
Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

Could this level of unfulfilled export potential result from lack of advice or awareness of where to get relevant advice or information? Other LSBS questions asked about small firms' use of public and private sources of advice and information, the levels and reasons for their use, and awareness of several business support organisations across the UK, largely within the public-sector

In the year preceding the survey over 1000 rural firms sought advice or information from external sources. Some of the reasons offered, were generic (for example business growth), others are very specific (for example employment law/ redundancies). Very few rural (22 firms) or urban firms described Exporting as a reason for seeking advice (Table 26). However, it appears unlikely that this low level of use of export-specific advice results from uncertainty as to who might help. More than 1000 rural firms (30%) informed interviewers that they were aware of the UK Trade and Investment (UKTI) (Table 27) – a leading provider of information and support for exporting or potentially exporting firms especially but not exclusively in England. A similar proportion of urban businesses in the survey also recognised UKTI.

[6] Across England, 462 rural firms exported goods or services. 570 rural firms indicated that they had goods or services suitable for exporting.

In conclusion therefore, England's rural firms are significantly more likely to be exporters of goods and services, and have goods or services suitable for exporting, than businesses operating from England's towns and cities.

Table 26 Reason for using information/advice - England

Reason for using information/advice	Number of Enterprises		Total
	Urban	Rural	
Business growth	315 (19.1%)	189 (19.7%)	504 (19.3%)
E-commerce/technology	166 (10.0%)	64 (6.7%)	230 (8.8%)
Employment law/redundancies	120 (7.3%)	56 (5.8%)	176 (6.7%)
Exporting	43 (2.6%)	22 (2.3%)	65 (2.5%)
Financial advice e.g. how and where to get finance	84 (5.1%)	55 (5.7%)	139 (5.3%)
Financial advice e.g. accounting, for general running of business	321 (19.4%)	180 (18.8%)	501 (19.2%)
Health and Safety	67 (4.1%)	47 (4.9%)	114 (4.4%)
Improving business efficiency/productivity	155 (9.4%)	116 (12.1%)	271 (10.4%)
Innovation	46 (2.8%)	29 (3.0%)	75 (2.9%)
Legal issues	117 (7.1%)	75 (7.8%)	192 (7.4%)
Management/leadership development	37 (2.2%)	20 (2.1%)	57 (2.2%)
Marketing	176 (10.7%)	56 (5.9%)	232 (8.9%)
Regulations	106 (6.4%)	99 (10.3%)	205 (7.9%)
Relocation	8 (0.5%)	11 (1.1%)	19 (0.7%)
Tax/national insurance law and payments	188 (11.4%)	106 (11.1%)	294 (11.3%)
Training/skills needs	59 (3.6%)	42 (4.4%)	101 (3.9%)
Workplace pensions	68 (4.1%)	44 (4.6%)	112 (4.3%)
Other	219 (13.3%)	118 (12.3%)	337 (12.9%)

Source: LSBS (2015): question K4: what did you seek information or advice about in the last year?
Shading denotes statistically significant response using Chi-square test (χ^2<0.05).

Table 27 Awareness of support

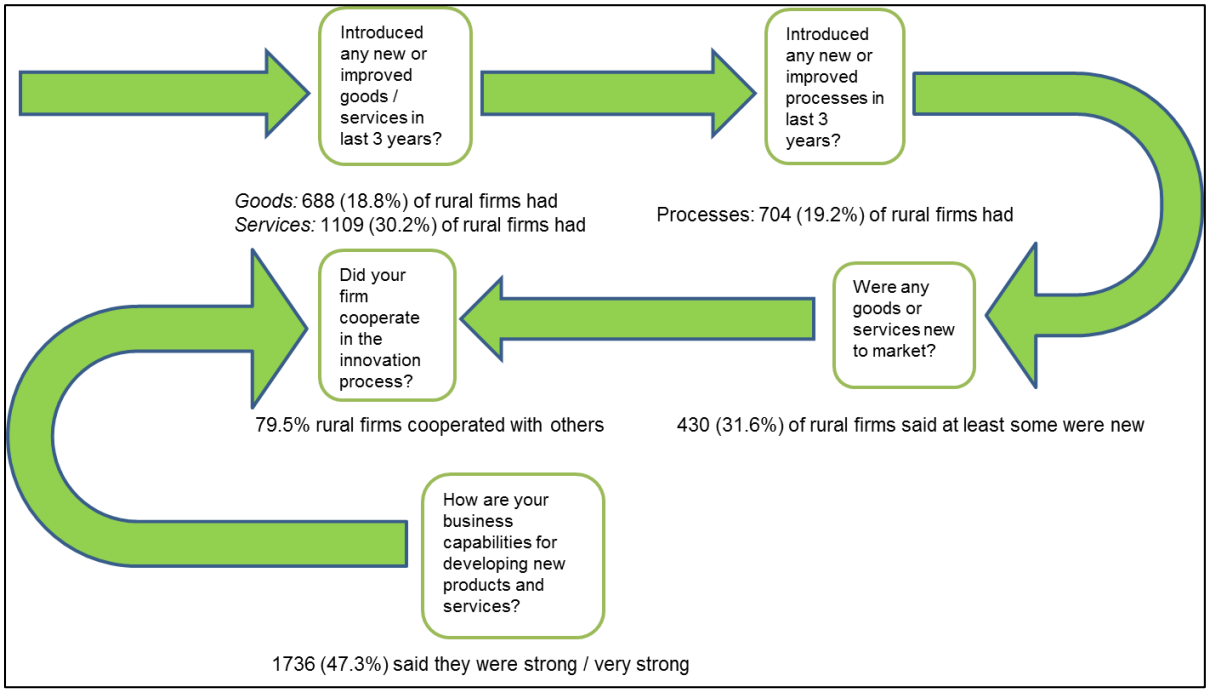
Which of the following are you aware of?	Number of Enterprise		Total
	Urban	Rural	
UK Trade and Investment (UKTI)	2,477 (30.2%)	1,083 (29.5%)	3,560 (30.0%)
The Tools for business section on the GOV. website	1,629 (19.9%)	701 (19.1%)	2,330 (19.7%)
The British business bank	1,061 (13.0%)	469 (12.8%)	1,530 (12.9%)
Innovate UK	2,256 (27.5%)	1,061 (28.9%)	3,317 (28.0%)
The business growth service	936 (11.4%)	444 (12.1%)	1,380 (11.6%)
Manufacturing advisory service	1,378 (16.8%)	683 (18.6%)	2,061 (17.4%)
The pensions regulation	5,797 (70.8%)	2,690 (73.4%)	8,487 (71.6%)
Investors in people	5,226 (63.8%)	2,355 (64.2%)	7,581 (63.9%)

Source: LSBS (2015), K1: which of the following are you aware of.
Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

4.3 Innovation

Figure 12 provides an overview of small business innovation in England. Firms were asked to respond to several questions related to introducing any new or improved process goods or services in their businesses.

Figure 12 Innovation trail



Source: LSBS (2015)

A) Have you introduced any new or significantly improved goods/services in the last 3 years?

Rural and urban firms are more likely to introduce new or improved services than new/improved goods. Table 28 shows that a similar percentage of rural and urban firms (30.2% *cf.* 30.2%) introduced new or improved services in the last three years. This pattern was repeated throughout the regions, with the North West an exception. Here urban firms were more likely to be service innovators than rural firms (30.7% *cf*. 22.1%) (Table A.15).

However, at the England level, rural firms introduced more new or improved goods in the last 3 years than urban firms, with 18.8 per cent compared to 16.5 per cent.

Table 28 has your business introduced any new or significantly improved goods and services in the last 3 year? - England

New or significantly improved goods	**Number of Enterprises**		**Total**
	Urban	**Rural**	
Yes	1,349 (16.5%)	688 (18.8%)	2,037 (17.2%)
No	6,809 (83.1%)	2,964 (80.8%)	9,773 (82.4%)
Don't know	29 (0.4%)	15 (0.4%)	44 (0.4%)
New or significantly improved services	**Number of Enterprises**		**Total**
	Urban	**Rural**	
Yes	2,474 (30.2%)	1,109 (30.2%)	3,583 (30.2%)
No	5,691 (69.5%)	2,547 (69.5%)	8,238 (69.5%)
Don't know	22 (0.3%)	11 (0.3%)	33 (0.3%)
Total	8,190	3,667	11,857

Source: LSBS (2015), J1: has your business introduced any new or significantly improved goods in the last 3 year? and J1A: has your business introduced any new or significantly improved services in the last 3 year?
Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

B) Any new or improved processes for goods or services

Firms in the LSBS were also asked to respond whether their businesses have introduced any new or improved processes for producing or supplying good or services. No statistically significant rural-urban differences were identified at the England level. Approximately 18 per cent of urban firms had introduced new or improved processes compared to 19 per cent of rural firms (Table 29). However, in the North West, North East, and Yorkshire & Humber regions, significant differences were found between rural and urban firms (Table A.16). More rural than urban firms in the North East and Yorkshire & Humber had new or improved processes for their goods or services (19% *cf*. 17.4% and 18.1% *cf*. 14.6% respectively). However, the North West's rural firms were less likely to introduce any new or improved processes than urban firms with 14.8 per cent of rural firms compared to 18.7 per cent of urban firms.

Table 29 business had introduced any new or significantly improved processes for goods or services in the last 3 years - England

Has your business introduced any new or significantly improved processes for producing or supplying goods or services?	**Number of Enterprises**		**Total**
	Urban	**Urban**	
Yes	1,449 (17.7%)	704 (19.2%)	2,153 (18.2%)
No	6,696 (81.8%)	2,940 (80.2%)	9,636 (81.3%)
Don't know	38 (0.5%)	22 (0.6%)	60 (0.5%)
Total	8190	3667	11857

Source: LSBS (2015), J3: Has your business introduced any new or significantly improved processes for producing or supplying goods or services in the last 3 years?

Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

C) Goods and services new to the market

To capture more disruptive innovations, firms were asked whether they had introduced goods or services that were new to the market. Across England there were no significant differences between rural and urban firms. However, significantly higher levels of new innovation were found among urban than rural firms in the North East and East Midlands (37.2% *cf.* 27.3% and 39.7% *cf.* 21.7% respectively), while higher levels were found among rural firms in the South East (rural 40.7% *cf.* urban 28.2%). (Table A.17).

Table 30 were any of these new or significantly improved goods and services innovations new to the market, or were they all just new to your business?

Whether goods/services new to the business.	**Number of Enterprises**		**Total**
	Urban	**Rural**	
At least some new to the market	928 (31.4%)	430 (31.6%)	1358 (31.5%)
All just new to the business	1,980 (67.1%)	905 (66.5%)	2,885 (66.9%)
Don't know	39 (1.3%)	22 (1.6%)	61 (1.4%)
Total	2,952	1,360	4,312

Source: LSBS (2015), J2: were any of these new or significantly improved goods and services innovations new to the market, or were they all just new to your business?

Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

D) Did you co-operate with anyone in the innovation process?

Firms were asked if they co-operated with anyone in the innovation process (Table 31). No significant rural-urban differences were identified. Both rural and urban firms were most likely to co-operate with *Suppliers of equipment, materials, services of software* (approx. 49.4%). Cooperation with *clients and customers from the private sector* was also important (approx. 38.7%). A second tier of cooperation partners in the innovation process included *other businesses from the same enterprise group* (approx. 25%), *clients or customers from the public sector* (approx. 26%), and *competitors and other businesses from the same industry* (approx. 21.5%). A third tier of cooperating partners, used the least by urban and rural firms, include *consultants and private R&D institutes* (approx. 11.5%), *Universities and institutions* (9.4%), and *Government or public research institutes* (5.5%).

Table 31 Did you cooperate with anyone in the innovation process? - England

Did your introduction of new goods, service or process innovations involve co-operation with any of the following?	Number of Enterprise		Total
	Urban	Rural	
Other businesses with your enterprise group?	836 (25.3%)	395 (25.1%)	1,231 (25.2%)
Suppliers of equipment, materials, services or software?	1,602 (48.5%)	805 (51.2%)	2,407 (49.4%)
Clients or customers from the private sector?	1,262 (38.2%)	627 (38.7%)	1,889 (38.7%)
Clients or customers from the public sector?	874 (26.4%)	385 (25.8%)	1,259 (25.8%)
Competitors or other businesses in your industry?	685 (20.7%)	362 (23.0%)	1,047 (21.5%)
Consultants, commercial labs or private R&D institutes?	365 (11.0%)	195 (11.5%)	560 (11.5%)
Universities or other higher education institutions?	329 (10.0%)	131 (8.3%)	460 (9.4%)
Government or public research institutes?	181 (5.5%)	86 (5.5%)	267 (5.5%)
None of these	718 (21.7%)	323 (20.5%)	1,041 (21.3%)

Source: LSBS (2015), J5: did your introduction of new goods, service or process innovations involve co-operation with any of the following? Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05).

Table A.18 shows the regional pattern of rural-urban differences in the co-operation of firms in the innovation process. The higher proportion of rural than urban firms co-operating with *Other businesses with your enterprise group* was statistically significant for West Midlands (31.2% *cf.* 19.3%), In the North West more urban than rural firms co-operated with other businesses (28.9% *cf.* 18.7%). There were significant rural-urban differences in levels of cooperation with *Suppliers of equipment, materials, services or software* in East Midlands and North East. More rural firms cooperated with these partners in East Midlands (61.6% *cf.* 47.1%), while a there was lower percentage of North east rural firms engaged in this type of cooperation (35.3% *cf.* 55.6%). More rural than urban firms in East Midlands and East of England co-operated with *Clients or customers from the private sector* in the innovation process. However, approximately 50 per cent of urban firms in North East co-operated with private clients or customers compared to around 26 per cent of rural firms. Some small firms in West Midlands and Yorkshire & Humber worked with *Competitors or other businesses in your industry* in processing new goods or services. Also, more rural than urban firms in West Midlands co-operated with *Consultants, commercial labs or private R&D institutes* (22.1% *cf.* 6.8%*)*, and interestingly, more rural than urban firms in Yorkshire & Humber collaborated with *Universities or other higher education institutions* (16.5% *cf.* 6.1%).

E) Capability for developing and introducing new goods or services

Firms were asked to rate their business capabilities on a 5-point from very poor to very strong, relative to capability for developing and introducing new goods or services. It was found that England's rural firms are more likely to feel that they had very strong capability in developing new goods or services (21.4% *cf.* 18.9%) (see Table A.10).

Table A.11 presents the regional breakdown. It shows that in four regions rural firms were more likely to indicate they had very strong capability: East of England (19.3% *cf.* 18.6%), North West (25.1% *cf.* 18.9%), South West (23.4% *cf.* 20.0%) and Yorkshire & Humber (25.6% *cf.* 18.3%). While more urban than rural firms in North East and South East have strong or very strong capability in innovative goods or services (18.9% *cf.* 14.9% and 20.1% *cf.* 18.4% respectively).

F) Reason for using advice: e-commerce and technology and improving business efficiency

Tables 32 and A.20 show an overview of significant rural-urban differences in reasons for using advice related to developing and introducing innovative goods or services. Only 2.9 per cent of firms highlighted Innovation as a reason. More relevant are reasons relating to *e-commerce and technology* and *improving business efficiency*. Table 32 shows that more of England's urban than rural firms use *e-commerce and technology* (10.0% *cf.* 6.7%), while more rural than urban firms use advice for *improving business efficiency/productivity* (12.1% *cf.* 9.4%).

Table 32 Reason for using information/advice - England

Reason for using information/advice	Number of Enterprises		Total
	Urban	Rural	
Business growth	315 (19.1%)	189 (19.7%)	504 (19.3%)
E-commerce/technology	166 (10.0%)	64 (6.7%)	230 (8.8%)
Employment law/redundancies	120 (7.3%)	56 (5.8%)	176 (6.7%)
Exporting	43 (2.6%)	22 (2.3%)	65 (2.5%)
Financial advice e.g. how and where to get finance	84 (5.1%)	55 (5.7%)	139 (5.3%)
Financial advice e.g. accounting, for general running of business	321 (19.4%)	180 (18.8%)	501 (19.2%)
Health and Safety	67 (4.1%)	47 (4.9%)	114 (4.4%)
Improving business efficiency/productivity	155 (9.4%)	116 (12.1%)	271 (10.4%)
Innovation	46 (2.8%)	29 (3.0%)	75 (2.9%)
Legal issues	117 (7.1%)	75 (7.8%)	192 (7.4%)
Management/leadership development	37 (2.2%)	20 (2.1%)	57 (2.2%)
Marketing	176 (10.7%)	56 (5.9%)	232 (8.9%)
Regulations	106 (6.4%)	99 (10.3%)	205 (7.9%)
Relocation	8 (0.5%)	11 (1.1%)	19 (0.7%)
Tax/national insurance law and payments	188 (11.4%)	106 (11.1%)	294 (11.3%)
Training/skills needs	59 (3.6%)	42 (4.4%)	101 (3.9%)
Workplace pensions	68 (4.1%)	44 (4.6%)	112 (4.3%)
Other	219 (13.3%)	118 (12.3%)	337 (12.9%)

Source: LSBS (2015): question K4: what did you seek information or advice about in the last year?
Shading denotes statistically significant response using Chi-square test (χ^2<0.05).

Table A.20 presents the regional pattern of rural-urban differences in using *E-commerce/technology* and *Improving business efficiency/productivity* for developing and introducing new products or

services. A higher proportion of urban than rural firms in East of England used advice on *E-commerce/technology* with 13.7 per cent and 6.5 per cent respectively. In contrast, more rural than urban firms used advice for *Improving business efficiency/productivity* in East of England (16.9% *cf.* 9.8%) and West Midlands (20.4% *cf.* 9.4%).

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Appendix 1– Analytical methods

Propensity Score Matching

Propensity Score Matching analysis is used in this report to explain the difference in performance between rural and urban businesses and awareness of advice and support between rural and urban areas. To estimate the propensity score, we firstly identify the covariates to include in the logistic (logit) model. When constructing propensity scores we need to include all variables thought to be related to both treatment and outcome (i.e., the true confounders) in order to reduce confounding. Even when a variable is thought to be related to the outcome but not the treatment (i.e., a potential confounder) it is worth including it in the propensity score because it will reduce the bias, i.e. the distance of estimated treatment effect from true effect (Brookhart *et al*., 2006; Austin, 2011). However only variables that are unaffected by treatment should be included in the model. The regression equation is written as:

$$Pr(T_i = 1) = \beta_0 + \beta_1 \mathbf{Z}_i + \varepsilon_i \quad (2)$$

where T is a dummy capturing whether the firm is located in rural or urban areas (it will be equal to 1 if the firm is located in rural areas or 0 if it is urban), i is the number of observations; i=1,…,n, **Z** is a vector of observed variables that may affect the outcome or the treatment (i.e. the firm's location) such as firm's age, industrial sector, number of employees, etc. and ε is an error term. The businesses located in rural areas are described as the treated group and those in urban areas as the control or untreated group. The rurality or rural location of businesses is the treatment, and the outcomes are performances (annual turnover and profitability) and use of external support.

Once propensity scores are calculated using equation (2), each rural firm is then matched with at least one[7] urban firm based on similar propensity score so that some observations may be omitted because their propensity scores are too dissimilar from the control group (Khandker *et al*., 2010). On the basis of the propensity score, there are different approaches used to match treated and untreated groups such as nearest-neighbour matching, caliper and radius matching, stratification matching, and kernel matching (Caliendo and Kopeinig, 2005; Pan and Bai, 2015). In this report, the matching of PSM process is conducted through nearest-neighbour and caliper matching options. The nearest-neighbour option is the most common matching estimator in which the individual from the comparison group is chosen as a matching partner for a treated individual that is closet in terms of propensity score. An untreated individual can be used more than once as a match. Thus this can increase the average quality of matching and reduce bias (Caliendo and Kopeinig, 2005). However, the nearest-neighbour matching may experience the risk of poor matches if the closet neighbour is relatively far away. This can be avoided by imposing a tolerance level on the maximum propensity score distance, which is called caliper (Dehejia and Wahba, 2002; Caliendo and Kopeinig, 2005). In assessing the matching quality, the balancing test needs to be satisfied to make sure that there are no significant difference on covariate means between the treatment and control (Dehejia and Wahba, 2002). Next, the average

[7] PSM allows to match one rural firm with several urban firms, weighting the propensity scores attached to each urban firm so that a best match for the rural firm can be found. Khandker *et al*. (2010) note that PSM is a useful technique when only covariates are strongly sufficient to determine the treatment, and the wide range of data of covariates allows the probability of the treated group based on the covariates to be specified more precisely.

treatment effect on the treated (ATT) is calculated as the mean difference in the outcome across these two groups, which allows to observe the effect of the treatment (Abadie and Imbens, 2012).

Table A.1 Covariate balance summary for turnover

	Raw	Matched
Number of obs =	9,375	5,390
Treated obs =	2,695	2,695
Control obs =	6,680	2,695

	Standardized differences		Variance ratio	
	Raw	Matched	Raw	Matched
SECTOR	-.0854081	.0097167	.9227066	.9936564
AGEB	.0238468	-.0334741	.9301299	1.084845
lnTOTEMP	-.1051667	-.0052684	.9054678	.9979082
SOTRADE	.0591732	.0225942	1.054843	1.019503
UNREG	-.0456562	0	.9064115	1
lnEMSECT	-.1209513	.0047672	.8216207	1.001222
lnEMAGE	-.0923058	-.0109175	.9018785	.9933486

Table A.2 Covariate balance summary for profit

	Raw	Matched
Number of obs =	10,038	5,818
Treated obs =	2,909	2,909
Control obs =	7,129	2,909

	Standardized differences		Variance ratio	
	Raw	Matched	Raw	Matched
SECTOR	-.0944764	-.0211827	.9252313	.9847799
AGEB	.0305925	-.0336317	.9147273	1.07815
lnTOTEMP	-.1105719	.0078639	.8931046	1.030634
SOTRADE	.0555188	.0278102	1.052481	1.024896
UNREG	-.051538	.0031482	.8936781	1.00729
lnEMSECT	-.1357999	-.0108258	.795602	.9880054
lnEMAGE	-.0950743	.0029087	.8895669	1.035303

Table A.3 Covariate balance summary for use of support

	Raw	Matched
Number of obs =	10,653	6,180
Treated obs =	3,090	3,090
Control obs =	7,563	3,090

	Standardized differences		Variance ratio	
	Raw	Matched	Raw	Matched
SECTOR	-.1008461	-.015423	.9238436	.9861005
AGEB	.0376489	-.0075428	.9120791	1.011426
lnTOTEMP	-.1177151	.0120383	.891701	1.00908
SOTRADE	.058024	.0262466	1.056027	1.023841
UNREG	-.0475614	-.0019661	.9014331	.995513
lnEMSECT	-.1406821	-.002959	.7987349	.9773531
lnEMAGE	-.1004892	.0076545	.8876183	.9959728

Appendix 2 – LSBS Rural / Urban source tables – regional levels

Table A.4 Plans for next three years at the regional level

Plans over next three years	East Midlands		East of England		North East		North West		South East		South West		West Midlands		Y&H	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Increase the skills of the workforce	376 (51.6%)	174 (45.5%)	477 (48.6%)	311 (48.0%)	164 (42.8%)	52 (51.5%)	596 (48.3%)	110 (41.8%)	923 (47.1%)	340 (44.0%)	501 (45.8%)	396 (45.2%)	429 (46.3%)	165 (56.5%)	374 (42.5%)	143 (43.1%)
Increase the leadership capability of managers	160 (22.0%)	96 (25.1%)	216 (22.0%)	167 (25.8%)	105 (27.3%)	37 (36.6%)	275 (22.3%)	46 (17.5%)	471 (24.0%)	177 (22.9%)	243 (22.2%)	210 (24.0%)	215 (23.2%)	78 (26.8%)	161 (18.3%)	60 (18.0%)
Capital investment (in premises, machinery etc.)	195 (26.8%)	107 (28.1%)	262 (26.7%)	182 (28.1%)	120 (31.3%)	36 (35.6%)	349 (28.3%)	75 (28.5%)	457 (23.3%)	218 (28.2%)	269 (24.6%)	295 (33.7%)	231 (24.9%)	113 (38.8%)	208 (23.7%)	99 (29.7%)
Develop and launch new products/services	278 (38.2%)	140 (36.6%)	308 (31.4%)	209 (32.3%)	159 (41.4%)	52 (51.5%)	408 (33.0%)	84 (31.9%)	703 (35.8%)	286 (37.0%)	395 (36.1%)	291 (33.2%)	319 (34.4%)	117 (40.1%)	264 (30.0%)	101 (30.3%)
Introduce new working practices	262 (36.0%)	134 (35.1%)	286 (29.2%)	208 (32.1%)	145 (37.8%)	47 (46.5%)	370 (30.0%)	82 (31.2%)	648 (33.1%)	240 (31.0%)	353 (32.2%)	269 (30.7%)	310 (33.4%)	91 (31.2%)	256 (29.1%)	92 (27.6%)
None of these	237 (32.6%)	140 (36.7%)	349 (35.6%)	239 (36.9%)	141 (36.7%)	20 (20.0%)	475 (38.5%)	90 (34.2%)	700 (35.7%)	279 (36.0%)	442 (40.4%)	338 (38.6%)	373 (40.2%)	80 (27.4%)	337 (38.3%)	127 (38.3%)
Don't know	4 (0.6%)	5 (1.3%)	8 (0.8%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	5 (0.4%)	1 (0.4%)	2 (0.1%)	0 (0.0%)	1 (0.1%)	2 (0.2%)	6 (0.6%)	0 (0.0%)	13 (1.5%)	0 (0.0%)

Source LSBS (2015): question R4: Does your business plan to do any of the following over next three years?
Shading denotes statistically significant response using Chi-square test (χ^2<0.05).

Table A.5 Major obstacles to businesses in general at the regional level

		East Midlands		East of England		North East		North West		South East		South West		West Midlands		Y&H	
		Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Obtaining finance	Count	128	53	179	111	84	41	226	51	292	127	180	185	141	35	144	61
	%	17.6%	13.9%	18.2%	17.1%	21.9%	40.6%	18.3%	19.4%	14.9%	16.4%	16.4%	21.1%	15.2%	12.0%	16.4%	18.3%
Taxation, VAT, PAYE, National Insurance, business rates	Count	193	112	278	209	87	37	332	62	557	228	317	316	280	100	254	93
	%	26.5%	29.3%	28.3%	32.3%	22.7%	36.6%	26.9%	23.7%	28.4%	29.5%	28.9%	36.1%	30.2%	34.4%	28.9%	27.9%
Staff recruitment and skills	Count	84	84	185	126	69	15	208	46	345	156	179	173	161	59	117	59
	%	11.5%	22.0%	18.9%	19.4%	18.0%	14.9%	16.9%	17.5%	17.6%	20.2%	16.3%	19.7%	17.4%	20.2%	13.3%	17.8%
Regulations/red tape	Count	278	168	342	272	117	50	445	115	636	355	421	414	290	137	313	161
	%	38.2%	44.0%	34.9%	42.0%	30.5%	50.0%	36.0%	43.9%	32.4%	45.9%	38.4%	47.3%	31.3%	46.9%	35.6%	48.3%
Availability/cost of suitable premises	Count	125	50	149	86	60	22	209	35	305	111	160	148	160	44	128	38
	%	17.2%	13.1%	15.2%	13.3%	15.6%	22.0%	16.9%	13.3%	15.6%	14.4%	14.6%	16.9%	17.3%	15.1%	14.5%	11.4%
Competition in the market	Count	322	133	446	246	175	48	586	106	885	314	487	347	436	145	451	138
	%	44.2%	34.8%	45.5%	38.0%	45.7%	47.5%	47.4%	40.3%	45.1%	40.6%	44.4%	39.6%	47.0%	49.7%	51.3%	41.4%
Workplace pensions	Count	72	66	106	78	35	8	144	30	199	80	139	87	86	32	116	26
	%	9.9%	17.3%	10.8%	12.0%	9.1%	8.0%	11.7%	11.5%	10.1%	10.3%	12.7%	9.9%	9.3%	11.0%	13.2%	7.8%
Late payment	Count	200	98	281	182	106	46	328	58	573	242	266	251	269	83	216	77
	%	27.5%	25.7%	28.6%	28.1%	27.6%	45.5%	26.6%	22.1%	29.2%	31.3%	24.3%	28.7%	29.0%	28.4%	24.5%	23.2%
Any other major issues or obstacles	Count	95	36	105	94	57	12	133	50	217	91	150	113	102	51	84	32
	%	13.0%	9.4%	10.7%	14.5%	14.8%	12.0%	10.8%	19.1%	11.1%	11.8%	13.7%	12.9%	11.0%	17.5%	9.5%	9.6%
None of these	Count	112	91	212	84	72	17	262	46	358	111	216	138	202	54	200	54
	%	15.4%	23.8%	21.6%	13.0%	18.8%	17.0%	21.2%	17.5%	18.3%	14.3%	19.7%	15.8%	21.8%	18.6%	22.8%	16.2%
Don't know/No opinion	Count	1	2	3	1	.	.	6	0	2	2	0	2	0	0	5	1
	%	.1%	.5%	.3%	.2%	.	.	.5%	0.0%	.1%	.3%	0.0%	.2%	0.0%	0.0%	.6%	.3%

Source: LSBS (2015): question G4 which of the following would you say are major obstacles to the success of your business in general?
Shading denotes statistically significant response using Chi-square test (χ^2<0.05).

Table A.6 Business's External Finance obtained at the regional level

Have you tried to obtain external finance for your business in the past 12 months?		East Midlands		East of England		North East		North West		South East		South West		West Midlands		Y&H	
		Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Yes - once	Count	50	34	72	54	31	3	72	9	170	63	88	61	64	29	43	22
	%	6.9%	8.9%	7.3%	8.3%	8.1%	3.0%	5.8%	3.4%	8.7%	8.2%	8.0%	7.0%	6.9%	9.9%	4.9%	6.6%
Yes - twice	Count	13	5	15	11	1	1	22	3	17	17	27	19	9	6	28	5
	%	1.8%	1.3%	1.5%	1.7%	0.3%	1.0%	1.8%	1.1%	0.9%	2.2%	2.5%	2.2%	1.0%	2.1%	3.2%	1.5%
Yes - three to five times	Count	7	6	7	5	14	3	27	4	35	5	11	13	10	7	8	1
	%	1.0%	1.6%	0.7%	0.8%	3.7%	3.0%	2.2%	1.5%	1.8%	0.6%	1.0%	1.5%	1.1%	2.4%	0.9%	0.3%
Yes - six to ten times	Count	6	0	3	2	0	0	2	1	6	1	0	0	1	0	0	0
	%	0.8%	0.0%	0.3%	0.3%	0.0%	0.0%	0.2%	.4%	0.3%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
Yes - more than ten	Count	1	1	3	5	1	0	3	0	3	1	4	1	4	1	1	0
	%	0.1%	0.3%	0.3%	0.8%	0.3%	0.0%	0.2%	0.0%	0.2%	0.1%	0.4%	0.1%	0.4%	0.3%	0.1%	0.0%
No	Count	643	335	871	569	336	94	1100	244	1718	682	960	778	837	248	795	302
	%	88.3%	87.7%	88.7%	87.8%	87.7%	93.1%	89.1%	93.1%	87.6%	88.3%	87.7%	88.8%	90.2%	84.9%	90.5%	90.7%

Source: LSBS (2015), H4: Have you tried to obtain external finance for your business in the past 12 months?
Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05).

Table A.7 Types of Finance currently being used at the regional levels

Types of finance	East Midland		East of England		North East		North West		South East		South West		West Midlands		Y&H	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Bank overdraft	55	43	94	78	33	5	102	29	198	73	123	131	89	31	101	36
	35.3%	41.3%	44.1%	44.6%	26.8%	17.9%	35.7%	51.8%	48.2%	33.2%	42.3%	50.2%	42.0%	36.5%	49.0%	37.9%
Commercial mortgage	8	6	15	34	7	3	23	12	18	18	16	31	15	10	22	14
	5.2%	5.8%	7.0%	19.4%	5.6%	10.3%	8.0%	21.4%	4.4%	8.2%	5.5%	11.9%	7.1%	11.8%	10.6%	14.7%
Credit cards	57	39	90	70	41	9	113	31	166	100	115	90	63	32	86	37
	36.8%	37.5%	42.1%	40.0%	33.3%	31.0%	39.5%	55.4%	40.4%	45.2%	39.5%	34.5%	29.7%	37.2%	41.7%	38.9%
Equity Finance (including peer to peer/ crowd funding, business angels, venture capital, equity from shareholders)	2	4	10	10	0	2	10	1	28	11	10	6	4	2	8	2
	1.3%	3.8%	4.7%	5.7%	0.0%	6.9%	3.5%	1.8%	6.8%	5.0%	3.4%	2.3%	1.9%	2.3%	3.9%	2.1%
Factoring/invoice discounting	6	12	9	2	2	1	18	3	11	6	8	4	12	3	3	1
	3.8%	11.5%	4.2%	1.1%	1.6%	3.4%	6.3%	5.3%	2.7%	2.7%	2.7%	1.5%	5.7%	3.5%	1.5%	1.1%
Leasing or hire purchase	43	31	60	37	20	5	64	24	86	65	68	63	52	27	49	26
	27.7%	29.8%	28.2%	21.1%	16.3%	17.9%	22.3%	42.9%	20.9%	29.5%	23.3%	24.1%	24.5%	31.8%	23.7%	27.7%
Loan from a bank, building society or other financial institution	48	35	63	70	31	9	100	24	107	57	89	104	71	33	73	19
	30.8%	33.7%	29.6%	40.0%	25.2%	31.0%	34.8%	42.9%	26.0%	25.9%	30.5%	39.8%	33.5%	38.4%	35.3%	20.0%
Mezzanine finance	0	0	2	0	0	0	0	0	1	2	5	2	0	5	0	0
	0.0%	0.0%	.9%	0.0%	0.0%	0.0%	0.0%	0.0%	.2%	.9%	1.7%	.8%	0.0%	5.8%	0.0%	0.0%
Peer to peer /crowd funding platform for debt	1	2	2	3	0	2	4	5	15	3	11	3	5	0	2	0
	.6%	1.9%	.9%	1.7%	0.0%	6.9%	1.4%	8.9%	3.6%	1.4%	3.8%	1.1%	2.4%	0.0%	1.0%	0.0%
Public equity (e.g. issue of shares on public market)	1	1	2	0	0	0	0	0	1	5	0	0	2	0	0	0
	.6%	1.0%	.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	2.3%	0.0%	0.0%	.9%	0.0%	0.0%	0.0%
Charitable/ Trust/ Grant	1	5	6	1	6	0	11	2	15	7	5	10	3	8	3	4
	0.6%	4.8%	2.8%	.6%	4.9%	0.0%	3.8%	3.5%	3.6%	3.2%	1.7%	3.8%	1.4%	9.3%	1.4%	4.2%
Government schemes	4	0	6	1	14	0	8	0	16	1	0	1	0	0	1	1
	2.6%	0.0%	2.8%	.6%	11.3%	0.0%	2.8%	0.0%	3.9%	0.5%	0.0%	.4%	0.0%	0.0%	.5%	1.1%
Other loans (inc personal finance)	4	1	5	2	0	1	5	0	8	10	6	4	3	1	13	0
	2.6%	1.0%	2.3%	1.1%	0.0%	3.4%	1.7%	0.0%	2.0%	4.5%	2.1%	1.5%	1.4%	1.2%	6.3%	0.0%
Other finance	3	2	4	1	2	2	7	3	14	3	11	2	16	2	3	0
	1.9%	1.9%	1.9%	.6%	1.6%	6.9%	2.4%	5.3%	3.4%	1.4%	3.8%	0.8%	7.5%	2.3%	1.4%	0.0%
None of these	27	15	37	21	23	9	46	3	62	35	50	44	44	14	38	22
	17.3%	14.4%	17.4%	12.0%	18.7%	32.1%	16.0%	5.3%	15.1%	15.9%	17.1%	16.9%	20.8%	16.5%	18.4%	23.2%
Don't know	3	0	0	0	0	0	.	.	1	0	0	0	0	0	.	.
	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	.	.	.2%	0.0%	0.0%	0.0%	0.0%	0.0%	.	.
Total	260		388		153		343		631		552		297		302	

Source: LSBS (2015), H6: Are you currently using any of these types of finance? Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

Table A.8 Amount of Finance obtained: Rural-urban Classification at regional level

Amount of finance obtained in the last 12 months.	East Midlands		East of England		North East		North West		South East		South West		West Midlands		Y&H	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Less than £24,999	49	15	58	29	21	3	72	3	96	43	74	34	51	28	30	14
	79.0%	45.5%	68.2%	46.8%	80.8%	50.%	69.9%	20.0%	65.3%	60.6%	72.5%	45.3%	71.8%	70.0%	56.6%	58.3%
£25,000 to £99,999	5	10	6	10	3	0	12	5	27	11	17	14	14	5	10	2
	8.1%	30.3%	7.1%	16.1%	11.5%	0%	11.7%	33.3%	18.4%	15.5%	16.7%	18.7%	19.7%	12.5%	18.9%	8.3%
£100,000 to £1,999,999	6	5	11	19	1	3	14	6	15	10	8	21	6	5	9	8
	9.7%	15.2%	12.9%	30.6%	3.8%	50.0%	13.6%	40.0%	10.2%	14.8%	7.8%	28.0%	8.5%	12.5%	17.0%	33.3%
£2 million or more	0	2	0	0	0	0	1	0	4	0	0	0	0	0	1	0
	0%	6.1%	0%	0%	0%	0%	1.0%	0%	2.7%	0%	0%	0%	0%	0%	1.9%	0%
Total	62	33	85	62	26	6	103	15	147	71	102	75	71	40	53	24

Source: LSBS (2015), H9F: How much finance did you obtain in the last 12 months?

Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

Table A.9 Businesses stopped applying for finance at the regional levels

Whether anything stopped them from applying for finance	East Midlands		East of England		North East		North West		South East		South West		West Midlands		Y&H	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Yes	46	11	49	33	28	2	75	8	89	37	31	29	51	7	30	6
	64.8%	31.4%	57.0%	52.4%	90.3%	25.0%	61.0%	53.3%	58.2%	50.7%	49.2%	55.8%	58.0%	43.8%	61.2%	28.6%
No	25	24	37	29	3	6	40	7	59	35	32	23	30	8	16	15
	35.2%	68.6%	43.0%	46.0%	9.7%	75.0%	32.5%	46.7%	38.6%	47.9%	50.8%	44.2%	34.1%	50.0%	32.7%	71.4%
Don't know	0	0	0	1	.	.	8	0	5	1	0	0	7	1	3	0
	0.0%	0.0%	0.0%	1.6%	.	.	6.5%	0.0%	3.3%	1.4%	0.0%	0.0%	8.0%	6.3%	6.1%	0.0%
Total	71	35	86	63	31	8	123	15	153	73	63	52	88	16	49	21

Source: LSBS (2015), H97: if any reason for not applying for finance?

Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

Table A.10 Business capabilities in England

Capability for	Capability for people management.		Capability for developing and implementing a business plan and strategy		Capability for developing and introducing new products or services		Capability for accessing external finance		Capability for operational improvement	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Very poor	12 (0.7%)	3 (0.3%)	472 (5.8%)	177 (4.8%)	672 (8.2%)	287 (7.8%)	1375 (16.8%)	523 (14.3%)	325 (4.0%)	139 (3.8%)
Poor	24 (1.3%)	28 (2.9%)	644 (7.9%)	386 (10.5%)	755 (9.2%)	306 (8.3%)	934 (11.4%)	412 (11.2%)	472 (5.8%)	185 (5.0%)
Average	260 (14.2%)	153 (15.6%)	2506 (30.6%)	985 (26.9%)	2,001 (24.4%)	905 (24.7%)	1362 (16.6%)	645 (17.6%)	1,944 (23.7%)	879 (24.0%)
Strong	764 (41.8%)	385 (39.3%)	2367 (28.9%)	1159 (31.6%)	2,171 (26.5%)	951 (25.9%)	1029 (12.6%)	545 (14.9%)	2638 (32.2%)	1227 (33.5%)
Very strong	748 (40.9%)	397 (40.5%)	1763 (21.5%)	783 (21.4%)	1,549 (18.9%)	785 (21.4%)	981 (12.0%)	494 (13.5%)	2069 (25.3%)	964 (26.3%)

Source: LSBS (2015), F4: How capable would you say your business is at, on the scale of 1 of 5 where 1 is very poor for doing these, and 5 is very strong. How capable is your business? Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

Table A.11 Business capabilities at the regional levels

Capability for accessing external finance.		East Midlands		East of England		North East		North West		South East		South West		West Midlands		Y&H	
		Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Very poor	Count	125	49	181	94	94	12	194	49	292	91	196	143	145	37	149	48
	%	17.2%	12.8%	18.4%	14.5%	24.5%	11.9%	15.7%	18.6%	14.9%	11.8%	17.9%	16.3%	15.6%	12.7%	17.0%	14.5%
Poor	Count	84	20	105	51	44	24	136	28	248	103	130	102	73	30	115	53
	%	11.5%	5.2%	10.7%	7.9%	11.5%	23.8%	11.0%	10.6%	12.7%	13.3%	11.9%	11.7%	7.9%	10.3%	13.1%	16.0%
Average	Count	133	70	161	103	47	15	203	46	331	152	186	141	162	65	139	53
	%	18.3%	18.3%	16.4%	15.9%	12.2%	14.9%	16.4%	17.5%	16.9%	19.7%	17.0%	16.1%	17.5%	22.3%	15.8%	16.0%
Strong	Count	101	50	110	97	55	8	164	43	233	104	124	138	129	51	112	54
	%	13.9%	13.1%	11.2%	14.9%	14.3%	7.9%	13.3%	16.3%	11.9%	13.5%	11.3%	15.8%	13.9%	17.5%	12.8%	16.3%
Very strong	Count	50	69	133	64	58	19	166	18	225	105	129	129	105	48	115	42
	%	6.9%	18.1%	13.5%	9.9%	15.1%	18.8%	13.4%	6.8%	11.5%	13.6%	11.8%	14.7%	11.3%	16.4%	13.1%	12.7%

Source: LSBS (2015), F4: How capable would you say your business is at, on the scale of 1 of 5 where 1 is very poor for doing these, and 5 is very strong. How capable is your business? Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

Table A.12 Goods Export of Rural and Urban businesses at the regional levels

Whether export goods.	East Midlands		East of England		North East		North West		South East		South West		West Midlands		Y&H	
	Urban	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**
Yes	40	27	42	40	22	5	58	8	124	47	51	76	41	17	41	21
	5.5%	7.1%	4.3%	6.2%	5.7%	5.0%	4.7%	3.0%	6.3%	6.1%	4.7%	8.7%	4.4%	5.8%	4.7%	6.3%
No	687	353	938	608	362	95	1176	255	1835	723	1045	798	887	274	838	312
	94.4%	92.7%	95.7%	93.8%	94.3%	95.0%	95.2%	97.0%	93.6%	93.5%	95.3%	91.1%	95.6%	94.2%	95.3%	93.7%
Don't know	1	1	0	0	0	0	1	0	1	3	0	2	0	0	0	0
	.1%	.3%	0.0%	0.0%	0.0%	0.0%	.1%	0.0%	.1%	.4%	0.0%	.2%	0.0%	0.0%	0.0%	0.0%
Total	728	381	980	648	384	100	1235	263	1960	773	1096	876	928	291	879	333

Source: LSBS (2015), C1: in the past 12 months did your business export any services outside of the UK: Rural-Urban England?

Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

TableA13 Services Export of Rural and Urban businesses at the regional level

Whether export services.	East Midlands		East of England		North East		North West		South East		South West		West Midlands		Y&H	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Yes	47	30	78	59	8	3	77	10	194	68	80	78	41	26	54	16
	6.5%	7.9%	8.0%	9.1%	2.1%	3.0%	6.2%	3.8%	9.9%	8.8%	7.3%	8.9%	4.4%	8.9%	6.1%	4.8%
No	679	349	902	589	376	97	1157	252	1758	696	1014	796	885	264	825	316
	93.3%	91.4%	91.9%	90.8%	97.9%	97.0%	93.7%	96.2%	89.7%	90.0%	92.6%	90.8%	95.5%	90.7%	93.9%	95.2%
Don't know	2	3	1	1	0	0	1	0	8	9	1	3	1	1	0	0
	0.3%	0.8%	0.1%	0.2%	0.0%	0.0%	0.1%	0.0%	0.4%	1.2%	0.1%	0.3%	0.1%	0.3%	0.0%	0.0%
Total	728	382	981	649	384	100	1235	262	1960	773	1095	877	927	291	879	332

Source: LSBS (2015), C1: in the past 12 months did your business export any services outside of the UK?

Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

Table A.14 Export Potentiality of Small Businesses at the regional level

Does your business have any goods or services that are suitable for exporting?	East Midlands		East of England		North East		North West		South East		South West		West Midlands		Y&H	
	Urban	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**
Yes	89	55	140	106	56	9	161	41	274	137	115	124	119	37	101	60
	14.3%	17.0%	17.1%	19.6%	16.9%	10.1%	14.9%	16.9%	17.0%	21.2%	12.2%	16.9%	14.4%	14.8%	13.1%	21.2%
No	530	267	678	436	276	80	916	195	1331	506	823	607	701	206	671	223
	85.3%	82.4%	82.7%	80.4%	83.1%	89.9%	85.1%	80.6%	82.4%	78.3%	87.1%	82.9%	84.8%	82.4%	86.9%	78.8%
Don't know	2	1	2	0	0	0	0	6	11	3	7	1	6	7	0	0
	0.3%	0.3%	.2%	0.0%	0.0%	0.0%	0.0%	2.5%	0.7%	0.5%	0.7%	0.1%	0.7%	2.8%	0.0%	0.0%
Refused	0	1	0	0	0	0	.	.	0	0	.	.	1	0	.	.
	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	.	.	0.0%	0.0%	.	.	.1%	0.0%	.	.
Total	621	324	820	542	332	89	1077	242	1616	646	945	732	827	250	772	283

Source: LSBS (2015), C6: Does your business have any goods or services that are suitable for exporting?
Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

Table A.15 has your business introduced any new or significantly improved services in the last 3 year? – Regional levels

New or improved services	East Midlands		East of England		North East		North West		South East		South West		West Midlands		Y&H	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Yes	208	118	300	201	115	40	379	58	608	244	352	259	274	108	238	81
	28.6%	30.9%	30.6%	31.0%	29.9%	40.0%	30.7%	22.1%	31.0%	31.6%	32.1%	29.6%	29.5%	36.9%	27.0%	24.4%
No	519	263	677	441	269	60	852	204	1347	527	742	616	651	184	635	250
	71.4%	68.8%	69.0%	68.1%	70.1%	60.0%	69.0%	77.9%	68.7%	68.2%	67.8%	70.4%	70.2%	62.8%	72.2%	75.3%
Don't know	0	1	4	6	0	0	3	0	4	2	1	0	3	1	7	1
	0.0%	0.3%	0.4%	0.9%	0.0%	0.0%	0.2%	0.0%	0.2%	0.3%	0.1%	0.0%	0.3%	0.3%	0.8%	0.3%
Refused	0	0	.	.	.	.	1	0	1	0	.	.	.	.	.	.
	0.0%	0.0%	.	.	.	.	.1%	0.0%	.1%	0.0%	.	.	.	.	.	.
Total	727	382	981	648	384	100	1235	262	1960	773	1095	876	928	293	880	332

Source: LSBS (2015), J1A: has your business introduced any new or significantly improved services in the last 3 year?

Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

Table A.16 business had introduced any new or significantly improved processes for goods or services in the last 3 years – Regional levels

Any new or significantly improved processes	East Midlands		East of England		North East		North West		South East		South West		West Midlands		Y&H	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Yes	113	51	194	124	67	19	231	39	368	162	195	193	154	56	128	60
	15.5%	13.4%	19.8%	19.1%	17.4%	19.0%	18.7%	14.8%	18.8%	21.0%	17.8%	22.0%	16.6%	19.2%	14.6%	18.1%
No	611	330	774	523	317	75	1000	218	1579	609	897	681	768	235	749	268
	83.9%	86.4%	78.9%	80.7%	82.6%	75.0%	81.0%	82.9%	80.5%	78.8%	81.9%	77.7%	82.8%	80.8%	85.2%	80.7%
Don't know	4	1	8	0	0	6	3	6	13	2	3	2	5	0	2	4
	0.5%	0.3%	.8%	0.0%	0.0%	6.0%	.2%	2.3%	0.7%	0.3%	0.3%	0.2%	0.5%	0.0%	0.2%	1.2%
Total	728	382	981	648	384	100	1234	263	1961	773	1095	876	927	291	879	332

Source: LSBS (2015), J3: Has your business introduced any new or significantly improved processes for producing or supplying goods or services in the last 3 years?
Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

Table A.17 Whether goods/services new to the business – regional levels

Whether goods/services new to the business.	East Midlands		East of England		North East		North West		South East		South West		West Midlands		Y&H	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
At least some new to the market	97	42	125	70	50	10	140	26	203	121	113	104	101	28	100	29
	37.2%	27.3%	34.8%	30.6%	39.7%	21.7%	32.3%	32.5%	28.2%	40.7%	27.2%	31.5%	30.1%	21.1%	33.1%	31.9%
All just new to the business	163	105	230	150	76	36	283	54	502	172	298	223	229	104	199	61
	62.5%	68.2%	64.1%	65.5%	60.3%	78.3%	65.4%	67.5%	69.7%	57.9%	71.6%	67.6%	68.2%	78.2%	65.9%	67.0%
Don't know	1	7	4	9	.	.	9	0	11	4	5	1	6	1	3	0
	0.4%	4.5%	1.1%	3.9%	.	.	2.1%	0.0%	1.5%	1.3%	1.2%	0.3%	1.8%	0.8%	1.0%	0.0%
Total	261	154	359	229	126	46	433	80	720	297	416	330	336	133	302	91

Source: LSBS (2015), J2: were any of these new or significantly improved goods and services innovations new to the market, or were they all just new to your business?
Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

Table A.18 Did you cooperate with anyone in the innovation process? – Regional levels

Did your introduction of new goods, service or process innovations involve co-operation with any of the following?		East Midlands		East of England		North East		North West		South East		South West		West Midlands		Y&H	
		Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Other businesses within your enterprise group	Count	62	45	111	63	48	15	145	20	183	82	112	99	74	48	101	22
	%	21.4%	27.3%	28.2%	23.6%	35.6%	29.4%	29.8%	18.7%	22.6%	24.8%	25.0%	25.8%	19.3%	31.2%	28.2%	19.1%
Suppliers of equipment, materials, services or software	Count	137	101	194	141	75	18	262	59	374	165	231	204	193	76	138	42
	%	47.1%	61.6%	49.1%	52.8%	55.6%	35.3%	54.0%	55.1%	46.2%	49.8%	51.4%	53.3%	50.4%	49.4%	38.5%	36.5%
Clients or customers from the private sector	Count	100	80	136	118	68	13	188	32	321	135	174	146	142	59	134	43
	%	34.5%	48.8%	34.4%	44.2%	50.4%	25.5%	38.7%	29.6%	39.6%	40.8%	38.8%	38.1%	37.1%	38.3%	37.4%	37.4%
Clients or customers from the public sector	Count	78	52	109	82	54	13	128	26	200	68	119	89	100	25	85	30
	%	26.8%	31.7%	27.7%	30.7%	40.0%	25.5%	26.4%	24.3%	24.7%	20.5%	26.6%	23.2%	26.1%	16.2%	23.7%	26.1%
Competitors or other businesses in your industry	Count	56	39	103	68	29	17	89	17	158	68	87	80	83	56	80	16
	%	19.3%	23.8%	26.1%	25.5%	21.5%	33.3%	18.4%	15.7%	19.5%	20.5%	19.4%	20.9%	21.7%	36.4%	22.4%	13.9%
Consultants, commercial labs or private R&D institutes	Count	45	23	46	30	14	2	59	18	90	35	56	40	26	34	28	14
	%	15.5%	14.0%	11.6%	11.2%	10.4%	3.9%	12.1%	16.7%	11.1%	10.6%	12.5%	10.4%	6.8%	22.1%	7.8%	12.2%
Universities or other higher education institutions	Count	31	11	40	38	9	4	69	11	69	13	39	18	50	17	22	19
	%	10.7%	6.7%	10.1%	14.2%	6.7%	7.8%	14.2%	10.2%	8.5%	3.9%	8.7%	4.7%	13.1%	11.0%	6.1%	16.5%
Government or public research institutes	Count	19	0	16	16	7	4	33	10	26	13	22	20	34	15	25	8
	%	6.5%	0.0%	4.1%	6.0%	5.1%	7.8%	6.8%	9.3%	3.2%	3.9%	4.9%	5.2%	8.9%	9.7%	7.0%	7.0%
None of these	Count	64	29	70	36	21	16	74	25	205	78	90	80	102	22	134	43
	%	22.1%	17.7%	17.8%	13.4%	15.6%	31.4%	15.3%	23.1%	25.3%	23.6%	20.1%	20.9%	26.6%	14.3%	37.4%	37.4%
Dont know	Count	4	0	5	6	0	0	0	0	3	1	1	1	0	1	1	0
	%	1.4%	0.0%	1.3%	2.2%	0.0%	0.0%	0.0%	0.0%	0.4%	0.3%	0.2%	0.3%	0.0%	0.6%	0.3%	0.0%

Source: LSBS (2015), J5: did your introduction of new goods, service or process innovations involve co-operation with any of the following? Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05).

Table A.19 Business capability for developing and introducing new products or services – regional levels

Capability for developing and introducing new products or services.	East Midlands		East of England		North East		North West		South East		South West		West Midlands		Y&H	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Very poor	58	49	75	44	31	2	108	27	191	44	80	76	60	23	68	22
	8.0%	12.8%	7.6%	6.8%	8.1%	2.0%	8.8%	10.3%	9.7%	5.7%	7.3%	8.7%	6.5%	7.9%	7.7%	6.6%
Poor	56	31	67	58	20	13	113	29	197	60	129	67	76	25	96	22
	7.7%	8.1%	6.8%	9.0%	5.2%	12.9%	9.2%	11.0%	10.0%	7.8%	11.8%	7.7%	8.2%	8.6%	10.9%	6.6%
Average	145	71	302	146	88	31	328	47	430	207	234	240	278	77	197	87
	19.9%	18.5%	30.8%	22.6%	22.9%	30.7%	26.6%	17.9%	21.9%	26.8%	21.4%	27.4%	30.0%	26.5%	22.4%	26.2%
Strong	227	112	255	180	136	27	265	71	557	198	287	207	209	74	234	81
	31.2%	29.2%	26.0%	27.8%	35.4%	26.7%	21.5%	27.0%	28.4%	25.6%	26.2%	23.7%	22.5%	25.4%	26.7%	24.4%
Very strong	140	77	183	125	72	15	233	66	361	155	219	205	180	56	161	85
	19.2%	20.1%	18.6%	19.3%	18.8%	14.9%	18.9%	25.1%	20.1%	18.4%	20.0%	23.4%	19.4%	19.2%	18.3%	25.6%

Source: LSBS (2015), F4: How capable would you say your business is at, on the scale of 1 of 5 where 1 is very poor for doing these, and 5 is very strong. How capable is your business? Shading denotes statistically significant response using Chi-square test (χ^2: p-value < 0.05)

Table A.20 Reason for using information/advice – regional levels

Reason for using information/advice	East Midlands		East of England		North East		North West		South East		South West		West Midlands		Y&H	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Business growth	32 24.2%	21 19.3%	29 14.1%	37 24.0%	9 15.3%	6 17.6%	50 18.8%	11 22.0%	83 19.9%	43 21.2%	52 20.7%	36 14.9%	29 15.9%	18 17.5%	31 22.0%	19 30.2%
E-commerce/technology	29 22.0%	14 12.8%	28 13.7%	10 6.5%	5 8.5%	6 17.6%	25 9.4%	1 2.0%	37 8.9%	10 4.9%	16 6.4%	11 4.5%	12 6.6%	8 7.8%	15 10.6%	4 6.3%
Employment law/redundancies	3 2.3%	10 9.2%	8 3.9%	6 3.9%	3 5.1%	2 5.7%	27 10.2%	4 8.0%	27 6.5%	16 7.9%	20 8.0%	9 3.7%	18 9.9%	3 2.9%	12 8.5%	7 11.3%
Exporting	1 .8%	3 2.8%	3 1.5%	6 3.9%	2 3.4%	1 2.9%	2 .8%	0 0.0%	18 4.3%	5 2.5%	10 4.0%	7 2.9%	7 3.8%	0 0.0%	0 0.0%	0 0.0%
Financial advice e.g. how and where to get finance	12 9.1%	6 5.5%	9 4.4%	8 5.2%	1 1.7%	4 11.8%	12 4.5%	3 6.0%	27 6.5%	17 8.4%	4 1.6%	9 3.7%	14 7.7%	4 3.9%	6 4.2%	4 6.5%
Financial advice e.g. accounting, for general running of business	23 17.6%	15 13.8%	45 22.0%	29 18.8%	3 5.1%	6 17.6%	54 20.3%	15 30.0%	87 20.9%	43 21.2%	46 18.3%	51 21.1%	34 18.7%	13 12.6%	28 19.9%	8 12.7%
Health and safety	8 6.1%	3 2.8%	6 2.9%	8 5.2%	7 11.9%	0 0.0%	16 6.0%	1 2.0%	13 3.1%	7 3.4%	7 2.8%	22 9.1%	5 2.8%	2 1.9%	5 3.5%	3 4.8%
Improving business efficiency/productivity	28 21.4%	19 17.4%	20 9.8%	26 16.9%	2 3.4%	2 5.9%	17 6.4%	7 14.0%	30 7.2%	12 5.9%	28 11.2%	21 8.7%	17 9.4%	21 20.4%	13 9.2%	8 12.9%
Innovation	14 10.7%	9 8.3%	11 5.4%	9 5.8%	0 0.0%	0 0.0%	2 .8%	0 0.0%	12 2.9%	7 3.4%	3 1.2%	1 .4%	2 1.1%	2 1.9%	1 .7%	1 1.6%
Legal issues	6 4.6%	8 7.3%	23 11.3%	14 9.2%	3 5.1%	4 11.8%	16 6.0%	2 3.9%	21 5.0%	25 12.3%	14 5.6%	15 6.2%	20 11.0%	2 1.9%	13 9.2%	4 6.5%
Management/leadership development	0 0.0%	2 1.8%	2 1.0%	5 3.2%	1 1.7%	0 0.0%	4 1.5%	0 0.0%	11 2.60%	3 1.5%	12 4.8%	3 1.2%	6 3.3%	0 0.0%	2 1.4%	6 9.7%
Marketing	12 9.1%	11 10.1%	26 12.7%	7 4.6%	6 10.2%	0 0.0%	37 13.9%	6 12.0%	44 10.6%	9 4.4%	26 10.4%	16 6.6%	6 3.3%	4 3.9%	18 12.8%	3 4.8%
Regulations	13 9.8%	16 14.7%	13 6.3%	6 3.9%	1 1.7%	5 14.7%	21 7.9%	4 8.0%	32 7.7%	19 9.4%	14 5.6%	31 12.8%	5 2.8%	10 9.7%	7 5.0%	9 14.5%
Relocation	. .	. .	0 0.0%	1 .7%	0 0.0%	0 0.0%	1 .4%	0 0.0%	0 0.0%	1 .5%	1 0.4%	8 3.3%	5 2.7%	1 1.0%	0 0.0%	0 0.0%
Tax/national insurance law and payments	19 14.5%	8 7.3%	26 12.7%	21 13.7%	2 3.4%	3 8.6%	35 13.2%	4 8.0%	40 9.6%	28 13.8%	23 9.2%	21 8.7%	25 13.8%	10 9.7%	18 12.8%	11 17.7%
Training/skills needs	0 0.0%	6 5.5%	6 2.9%	4 2.6%	0 0.0%	0 0.0%	8 3.0%	1 2.0%	23 5.5%	7 3.4%	8 3.2%	12 5.0%	4 2.2%	6 5.8%	8 5.7%	6 9.7%
Workplace pensions	6 4.6%	5 4.6%	7 3.4%	8 5.2%	1 1.7%	1 2.9%	10 3.8%	4 8.0%	18 4.3%	11 5.4%	13 5.2%	10 4.1%	7 3.9%	3 2.9%	6 4.20%	1 1.6%
Other	10 7.6%	12 11.0%	39 19.0%	19 12.3%	9 15.3%	3 8.6%	36 13.5%	5 10.0%	55 13.2%	25 12.3%	30 12.0%	42 17.4%	27 14.9%	8 7.8%	12 8.5%	5 7.9%

Source: LSBS (2015): question K4: what did you seek information or advice about in the last year? Shading denotes statistically significant response using Chi-square test (χ^2<0.05)